a W. R. C. Smith publication

FIFTY CENTS

Textile Industries

Formerly "COTTON"

JULY, 1959

Use 59% less caustic! page 71

Which temple roll? page 78

Watch your fancy! page 81

Resin treating cotton knits? page 134

AMERICAN ENGINEERED, MANUFACTURED & SERVICED 100%

NEW DIMENSION IN PRODUCTION AND PROFIT

HARTFORD IMPROVED TOP DRIVE FILLING SPINDLE

INCREASED PRODUCTION WITH 25/32" WHORL

Brings you higher spindle speed — more pounds — greater yardage of yarn per spindle hour

LOWER COST PRODUCTION

1) Elimination of acorn increases cleaning cycle time
2) Pre-greased Ball Bearings do away with spindle oiling for at least 5 years (when they are re-lubricated for another 5 years)
3) Power consumption reduced

BETTER YARN QUALITY

With Pre-Greased Ball Bearings you also are assured of cleaner yarn — more uniform yarn tension — more even bobbin lay — less ends down — cleaner rails and floors

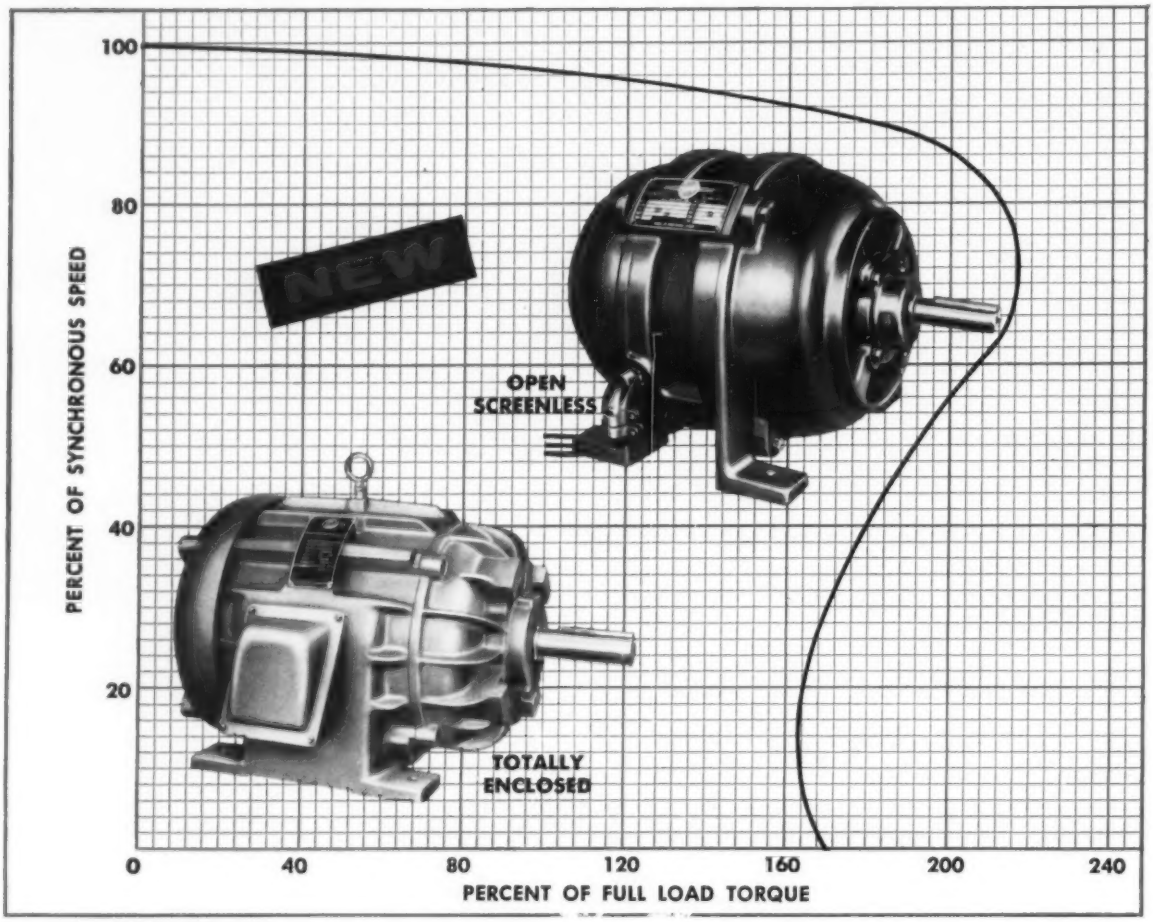
GUARANTEE

Fully guaranteed against functional failure for an indefinite period

HARTFORD-GREENVILLE DIVISION
STANDARD SCREW COMPANY
BOX 1776 GREENVILLE, S. C.

4
Ann Arbor Mich
No First St
ersity Microfilms

NEXT MONTH: TI reports on the man-made fibers



DIEHL* "Smooth-Accel" TEXTILE MOTORS

Designed specifically for roving, spinning, combing and similar applications requiring smooth, uniform acceleration

Available in Sizes From 1 to 20 HP

This new line of DIEHL "Smooth-Accel" Textile Motors meets the textile industry's requirements for motor drives with extra smooth and uniform acceleration characteristics, and incorporates design advancements which make this new line top-choice for the efficient operation of today's high speed textile machines.

Note These Important New Advantages

● **Smooth Acceleration:** Smooth, gradual rate of acceleration over the entire operating cycle features the new "Smooth-Accel" line . . . resulting in materially reduced "ends-down" time, and uniform quality of production. The typical curve above illustrates the excellent speed-torque characteristics from zero to full speed. Reconnection of leads for new frame break-in is unnecessary.

● **Reduced Power Costs:** DIEHL "Smooth-Accel" Motors have both high efficiency and power factor over the complete operating range . . . *keep power costs to a minimum.*

● **High Over-Load Factor:** Liberal electrical design and effective ventilation of DIEHL "Smooth-Accel" Motors substantially increase the overload factor, minimizing initial investment . . . *more horsepower at lower cost.*

● **Long Service Life:** "Smooth-Accel" motor windings feature high dielectric and mechanical strength, high thermal rating and special humidity-proof impregnation ... protection against wide voltage variations and the effects of continuous operation under adverse conditions.

● **Construction Features:** Streamlined, easy-to-clean enclosures—dynamically balanced rotors — over-size bearings — large 4-way terminal box (oil- and water-tight connector and vinyl-covered cable optional) — standard NEMA mounting dimensions for ready interchangeability — *minimum maintenance.*

. . . these advantages are yours at *no increase* over standard textile motor prices! Before selecting your next motor drive for replacements, modernization or new equipment, get the DIEHL story about the New "Smooth-Accel" line.

*Trademark of DIEHL MANUFACTURING COMPANY

DIEHL MANUFACTURING COMPANY
Electrical Division of THE SINGER MANUFACTURING COMPANY
Finderne Plant, SOMERVILLE, NEW JERSEY

Baltimore • Chamblee, Ga. • Charlotte • Chicago • Cincinnati • Cleveland • Los Angeles • Milwaukee • Needham, Mass. • New York • Philadelphia • Syracuse

DRAPER BRIEFS
NEWS OF INTEREST IN WEAVING

NEW TEMPLE CONSTRUCTION GAINS RAPID MILL ACCEPTANCE

With 17,500 units already in weave rooms, it is expected that a substantial increase in this amount will result from *further* Draper developments.

Introduced to the mills three years ago, the patented scissors-type thread cutter temple was initially available only for Draper X-2 looms. Enthusiastic mill interest and ready acceptance prompted the adoption of this new temple to other Draper loom models. It is now available, in most popular Draper temple constructions for X, X-2, XD, XP, XP Special, XP-2, L, O, XL, XK, and E model looms.

This new temple thread cutter features scissors-type upper and lower thread cutting knives. The upper knife assembly is mounted on a replaceable, rubber torsional bearing which requires no lubrication. Danger of temple lubricants staining the cloth is eliminated.

Fewer parts often reduce maintenance cost. The scissors-type thread cutter eliminates some parts common to former temples such as the thread cutter spring, conventional thread

cutter and top end, thereby reducing temple wear and maintenance costs

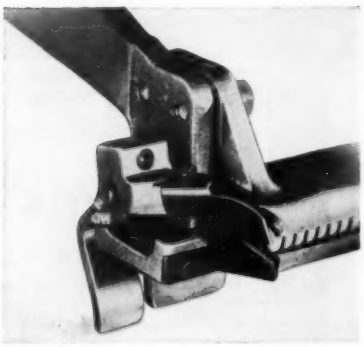
Another advantage of this new thread cutter results from a design which permits cutting shorter ends after bobbin transfer.

Thread cutter knives are regularly furnished with a rust-resistant finish but, when specified, they are also available with a satin-finish chrome plating for maximum rust resistance and a more durable finish.

The Draper #3 Selvage Post Attachment may be applied to all scissors-type temples except the #532 for E model looms. This selvage post attachment, also mounted on a rubber torsional bearing which requires no lubrication gives better selvages on many weaves.

Scissors-type thread cutter temples have proven their worth in the weave rooms where they are in use.

This original temple construction is another in the long line of Draper improvements in weaving equipment. It illustrates — once again — why it is good business to specify Draper quality parts and accessories which give the maximum in service and performance.



SCISSORS-TYPE THREAD CUTTER TEMPLES

#524 TEMPLES

for X and X-2 looms
4¼" **double** roll temple (cloth **over** rolls)

#525 TEMPLES*

for XD, XP, XP Special, and XP-2 looms
4¼" **double** roll temple (cloth **under** rolls)

#526 TEMPLE*

for XD, XP, XP Special, and XP-2 looms
4¼" **double** roll temple (cloth **over** rolls)

#528 TEMPLE*

for L, O, XL, XD, XP XP Special, and XP-2 looms
4¼" **triple** roll temple (tandem) (cloth **over** rolls)

#531 TEMPLE°

for XK, X, and X-2 looms
4¼" **double** roll temple (cloth **under** rolls)

#532 TEMPLE

for E model loom
4¼" **double** roll temple (cloth **over** rolls)

#536 TEMPLE

for X and X-2 looms
Three 4¼" triple rolls (1 over 2)

* On XD looms can be applied with solid lay and yielding reed

° On XK looms can be applied with solid lay and yielding reed

NOTE. It is important that mill give the LOOM ORDER NUMBER when ordering these temples.

DRAPER CORPORATION • HOPEDALE, MASS.

Which of these 3 products and services can you use from BECCO?

"Enclosing $1.00 — Send Patent License"

Well, perhaps there's a little more to your gaining use of Becco patents than just mailing your dollar in, but not much more. And certainly, no more money. The $1.00 really does cover it.

Becco has lots of patents, granted as a result of innovations in the use of Hydrogen Peroxide and other Peroxygen chemicals developed in Becco's Research Laboratories. But they don't do us a whole lot of good locked tightly in our safe. So, we long ago adopted the following policy:

If one of our patents can help you, we'll be glad to license the rights to you **perpetually**, for just one dollar. You get a nice certificate, incidentally, to cover the legalities, but more important — you also get free our complete engineering help in setting up your process, handling the material, maintenance, etc., etc.

What do **we** get? You as a **customer** — we hope — but there's no obligation on your part. Just seems to work out that way, though — when we know enough about a particular peroxygen to hold a patent on its use, chances are we've also learned enough to produce it purer than anyone else. You benefit from this; we do, too.

Use the coupon below to ask for a Sales Engineer — or our list of patents — that, may help you solve an important problem.

BECCO fmc

BECCO CHEMICAL DIVISION, FMC
Station B, Buffalo, New York
Dept. TI-F

Gentlemen:
Please send your list of patents available on the use of

- ☐ Hydrogen Peroxide
- ☐ Peroxygen Chemicals
- ☐ Persulfate Chemicals

☐ Please have a Sales Engineer call.

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FIRM_____

ADDRESS_____

CITY_____

ZONE____ STATE_____

What's a PEROXYGEN?

Fact is, "peroxygen" is a word that Becco uses to indicate that we can tie oxygen onto just about anything.

How come? Well, years of experience in producing Hydrogen Peroxide has produced an affinity between Becco and oxygen — an affinity we have capitalized on to give you compounds that will provide a ready source of oxygen — wherever, however and whenever you need it.

We have a good number of such compounds on the shelves. Quite a few others are in development. Still others are merely in our minds, but we can begin drawing them out if you're interested.

We hope you are interested. But we'll never know—unless you fill in the coupon below and mail it to us. Why not?

BECCO fmc

BECCO CHEMICAL DIVISION, FMC
Station B, Buffalo, New York
Dept. TI-D

Gentlemen:
Send me more information about Becco Peroxygen Chemicals.

NAME_____

FIRM_____

ADDRESS_____

CITY_____

ZONE____ STATE_____

Problems in handling Hydrogen Peroxide

Becco's Four-Fold Engineering Service Program—offered free —includes:

1. Comprehensive survey of your facilities.
2. Specific proposal with recommendation of proved equipment and where it is obtainable.
3. Installation supervision by Becco.
4. Periodic inspection and permanent service.

Can you use this free Becco help, based on more years of experience with bulk handling of H_2O_2 than any other manufacturer? Use the coupon to let us know.

BECCO fmc

BECCO CHEMICAL DIVISION, FMC
Station B, Buffalo, New York
Dept. TI-B

Gentlemen:
Please tell me more about your Four-Fold Engineering Service.

NAME_____

FIRM_____

ADDRESS_____

CITY_____

ZONE____ STATE_____

Textile Industries

Formerly "COTTON"

JULY 1959 VOL. 123, NO. 7

CONTENTS

MANAGEMENT

97 **Do you hire the blind to see?**

Many simple tools are available to the employment office in selecting the right skill for the job—and don't forget the medic.

115 **Textiles in Nationalist China**

Nationalist China's textile industry, nonexistent a decade ago, prospers with U. S. help.

COTTON AND MAN-MADE FIBERS

74 **Cotton research**

Highlights of the 10th Cotton Research Clinic: the SRRL flatless card, massive cotton blending for mill production, and the control of comber noils.

78 **Temple rolls are little, but . . .**

Poor fabric quality and loom downtime are often attributable to use of the wrong type. Experience with a new-type temple roll.

101 **Weaving with a sewing machine**

East German machine makes a fabric at 4,160 ppm.

103 **Poster No. 33**

Warns employees to break out and report all gouts in roving.

106 **Find traveler weight needed for yarn change**

A nomogram which provides a simple and rapid way of finding the weight of the new traveler needed when changing yarn numbers.

WET PROCESSING

71 **Use 59% less caustic**

That, plus reduced stream pollution, was the result when Pontiac Division of Fruit of the Loom installed a caustic recovery system.

94 **How much will THPC flameproofing cost?**

Preliminary cost estimates for the commercial treatment of cotton fabrics with THPC-methylolmelamine to impart flame resistance.

87 **Put the sales engineer on the spot**

These tips on choosing, using, and maintaining rolls show the kind of help he can give.

WOOL

81 **Watch your fancy!**

Tips on the care and operation of fancies on woolen cards, including advice on settings, speeds, clothing, and other points.

CONTINUED ON NEXT PAGE ▶

Textile Industries contents for JULY 1959 continued

KNITTING

134 Styling cotton knits for resin treatment
William Heller Co. expands to strengthen its position as a diversified knitter and finisher of outerwear fabrics.

137 How do YOU remove Banner cam disks?
With the tool described in this article, the job is easy—and it can be made in your mill shop.

GENERAL AND TECHNICAL

80 A laminated plastic shuttle is born
85 Shirley Analyzer accurate for lint content
86 New boilers save $$$
90 Georgia mill men discuss spinning
93 Have a carding problem?
96 Tufted textile shipments up
98 Research center for Philadelphia
99 Tight-pulley song
107 Teflon-coated slasher cylinders
119 Broad-woven fabric output down
121 More space at 1960 Atlantic City show
131 Hosiery makers optimistic
133 Tips for dyeing and finishing crimp-bulked nylon sweaters
138 Bright outlook for underwear mills
138 Socks a symbol of happy marriage?
141 Modify Model E loom shipper lever to relieve strain
145 Fade-proofing chemical for pad application
146 Applying right amount of wax to sewing thread
149 Stop oil slinging from card comb boxes
153 Help in proper sweater sizing

DEPARTMENTS

6 Shorts and remnants
55 News in brief
65 Recent technical and commercial developments
67 Executive views
69 Future events
141 How others manage
155 New product parade
173 Free booklets
183 Personal notes
187 Mill notes
191 Supplier notes

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Photo courtesy Princeton Knitting Mills, Inc., New York, N. Y.

It puts the "soft sell" on a solid foundation!

Cloud-soft synthetic fibers are getting a close look by more and more textile manufacturers; are also showing up in an increasing number of products. One of the newest is this knitted scatter rug called "Pouff" which has the look and feel of sheer luxury, but has surprising strength and durability.

Basis for this strength comes from CHEMIGUM LATEX, which is used in the back-size. It's the latex backing that gives this rug its excellent body, pile lock, dimensional stability, flexibility and resistance to raveling. What's more, CHEMIGUM LATEX provides these solid advantages on a long-term basis. Reason: it has great resistance to dry cleaning and aging.

If you are considering a pile fabric product, it will pay you to investigate the strong selling features of back-sizes based on CHEMIGUM LATEX. For more information on CHEMIGUM LATEX or other Goodyear latices for textile applications, just write to:

Goodyear, Chemical Division, Dept. G-9439
Akron 16, Ohio

GOODYEAR
CHEMICAL DIVISION

Chemigum—T.M. The Goodyear Tire & Rubber Company, Akron, Ohio

MODERN DYEHOUSE EQUIPMENT

THE DEPENDABLE KWG SKEIN DYEING MACHINE

KWG Double Reel Skein Dyeing Machine —all stainless steel unit built in capacities to 1000 pounds.

FOR QUALITY DYEING
WITHIN INCREASED BUT MORE NORMAL TEMPERATURE and PRESSURE LIMITS

Perfection in dyeing—for natural and the new synthetic fibers—is yours with KWG Skein Dyeing machines. Rugged construction . . . improved 'Ferrous-Wheel' performance . . . give you the penetration and evenness of color—the permanence of tone—for that extra measure of sales appeal—without concern for costly high-temperature, high-pressure methods. Dual-operations possible including scouring, dyeing and shrink-proofing, or scouring, bottom bleaching and dyeing of pastel shades.

You can point the way to extra sales . . . extra profits . . . today by writing Klauder Weldon Giles. A KWG representative will be glad to survey your needs. If necessary, he'll design special equipment to your specifications. There's no obligation.

Klauder Weldon Giles MACHINE COMPANY

ADAMS AVENUE & LEIPER STREET • PHILADELPHIA 24, PA.

SHORTS & REMNANTS

►Textiles in the operating room? Textiles supply not only the uniforms, gowns, and gauze for surgeons, nurses, and interns in the operating room, but uniforms, dressings, sheets, pillow cases, toweling, draperies, upholstery, and more throughout 6,966 U.S.A. hospitals with their 1,607,692 beds.

That's some of the copy from another of TI's current series of ads appearing in *Industrial Marketing*. The series has the theme "This Is Textiles, U.S.A.," and we have a few reprints available.

Bahnson Among the Stars

Agnew H. Bahnson, Jr., is a man of many parts—president of The Bahnson Co., inventor, guiding force in the formation of the Institute of Field Physics at the University of North Carolina, mountain climber, composer, painter, world traveler. Now he is probably the first textile man—manufacturer or supplier—to publish a novel of science fiction.

His book, "The Stars Are Too High," has been published by Random House. Basically, it is a plea for an approach to the solution of world problems in terms of world welfare rather than national interests, before atomic destruction eliminates all chance for a solution.

(Continued on page 10)

Amco Heliclone Loom Cleaner in Cannon Mills, Kannapolis, N. C.

High quality and efficient production

Amco Heliclone® Loom Cleaners help Cannon Mills to maintain these high standards!

At Cannon Mills, Kannapolis, N. C., automatic, continuous cleaning with Heliclone Loom Cleaners helps Cannon to maintain its famous quality — and to meet production schedules. Room appearance is also improved, and employee morale kept high.

Heliclones are designed to help you cut down on the old-fashioned blow pipe and manual method of cleaning. They serve to eliminate end runs and floats, waste bunches, end breakage, overshots, broken picks, and oil spots caused by loose accumulated waste.

Behind the development of the Heliclone is more than 70 years' experience working with textile mills. Amco can help you with your winder and card room cleaning problems, too! Get the facts.

Rotating nozzles driven by air streams form overlapping circular paths. Results: high velocity bursts of air over loom and warp surfaces for best cleaning. Supplementary outlets clean track and ceiling.

Cleveland-Rowan Plant of American Moistening Company. This modern plant is located at Cleveland, N. C. for the fabrication of duct work and sheet metal products.

AMCO

Since 1888

AIR CONDITIONING EQUIPMENT

American Moistening Company, Cleveland, N. C. • Branches: Atlanta, Ga. • Providence, R. I. • Toronto, Canada

Wider use of Scissors-Type Thread Cutting Temples on Draper Looms. Enthusiastic mill interest has prompted the design and adaptation of temples featuring the scissors-type thread cutter to most loom conditions. These new temples can now be applied to virtually all X, X-2, XD, XP, XP Special, XP-2, XL, XK, E, L and O model looms. Fewer parts cut maintenance costs and elimination of thread cutter lubrication reduces the danger of staining the cloth. For complete information contact your Draper sales representative.

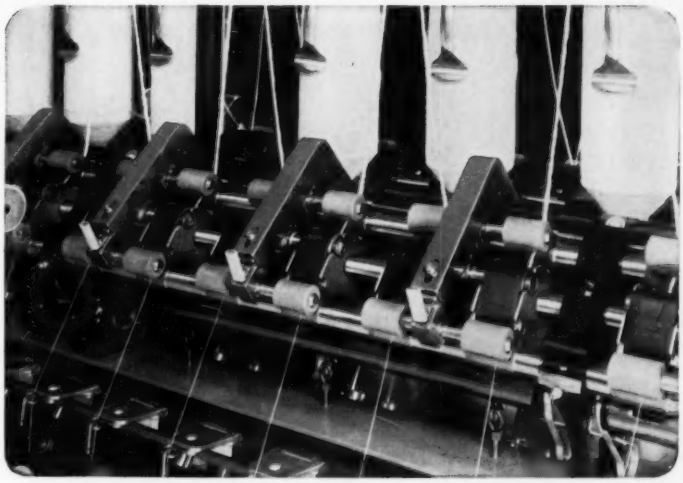
DRAPER CORPORATION

HOPEDALE, MASS. • ATLANTA, GA. • GREENSBORO, N. C. • SPARTANBURG, S. C.

THE MOST SENSIBLE ANSWER TO GADGET-FREE TOP ROLL SUSPENSION

ROBERTS *PosiWate* SUSPENSION SYSTEM

PosiWate Ball Bearing Top Roll Suspension eliminates all cap bars and the need for top roll oiling. All three lines of top rolls have double-row ball bearings; heavier weighting can be handled when required. Weight distribution is positive. Hooks, short springs and other gadgets are not used. Roberts Ball Bearing Bottom Rolls with EvenGrip Fluting are also available.



A FEATURE OF

ROBERTS ARROW

MODEL M-1

and changeover modernization for any make of frame

ARROW M-1 SPINNING FRAMES

for cotton and for synthetics 1½ to 3¼ inches long

PosiWate Top Roll Suspension

UnaRing Balloon Control

EvenGrip Fluted Bottom Rolls

Roberts Supreme Ball Bearing Spindles

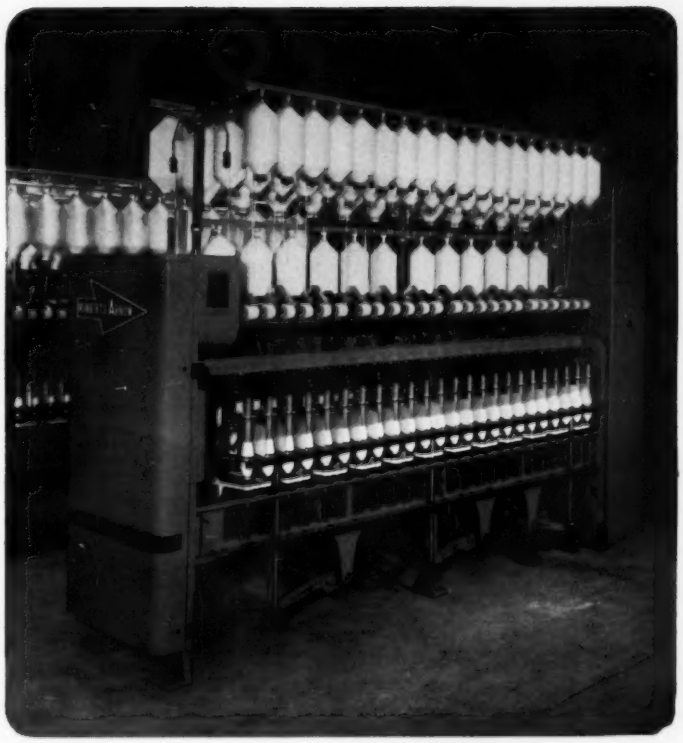
Double-Apron High Draft System

UnitVac Power-Suction Cleaning

Roberts All-Ball-Bearing Head

Unitized Sectional Frame

AeroCreel with Latch-Type Bobbin Holders



ROBERTS COMPANY

SANFORD, NORTH CAROLINA

NOW YOU CAN THROW THE BOOK AT YOUR ROLL-RECOVERING COSTS

and S-W will give you the book. It is the S-W ROLL-GUARD Plan. It includes a few simple steps you can take to get more service, more production from the rubber-covered rolls you use.

ASK YOUR S-W SALES ENGINEER FOR THE ROLL-GUARD PLAN.

You will find it helpful, and you will not be obligated.

STOWE-WOODWARD, INC.
Newton Upper Falls, Mass.
Neenah, Wisconsin
Griffin, Georgia

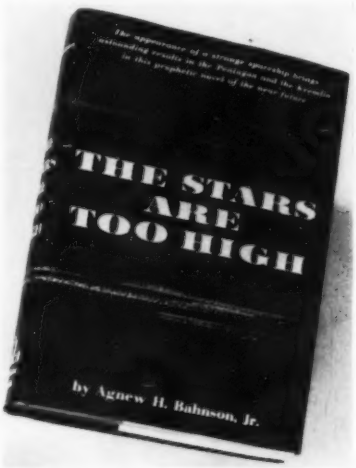
on the West Coast
HUNTINGTON RUBBER MILLS, INC.
Seattle, Washington - Portland, Oregon
Port Coquitlam,
British Columbia, Canada

Textiles U.S.A. are promoted with these stickers. Ask for your free supply.

SHORTS & REMNANTS

(from page 6)

The vehicle for his plea, both figuratively and literally, is a space ship operated through control, or at least direction, of gravitational forces. The ship has been developed secretly by a German scientist and two Americans. Rather than turn it over to the Air Force or to the U.N., the group decides to use the vessel to scare the U.S. and Russia into cooperation as the only alternative to sure annihilation.



As an old science fiction buff, weaned on H. G. Wells and Hugo Gernsback, I'm tempted to list the many books and novelettes with the same theme and the same general approach. But I won't. Mr. Bahnson's book has some new twists, and it's well written. I liked it.

I suggest that you go out and get a copy. It's available now at your nearest book store for $3.95.

Wool In Our Eyes

"On page 15 of your April issue, you show a picture of a 'century-old skein reeler' . . .

"We thought we had trained you better than to call a wool spinning wheel a reeler and we trust that you will look into this matter and improve your knowledge."

A. WARD FRANCE
Dean of Faculty
Phila. Textile Inst.
Phila., Pa.

► Blushingly, we admit to having been distracted by the 20-odd year old frame in the background—the one belonging to Charlene Holt.

►Rich's advertises in the *Atlanta*

(Continued on page 12)

SANDOZ

Mercerol® QW

for faster wetting and increased shrinkage in mercerizing

Sandoz developed the first product for mercerizing grey goods twenty-five years ago. Now, following a series of major improvements, Sandoz brings you new Mercerol QW . . . offering greater mercerizing advantages than ever in terms of faster wetting and increased shrinkage. Write for your sample today.

SANDOZ, INC. 61-63 Van Dam Street, New York 13, N.Y., ALgonquin 5-1700

SANDOZ

THE NATIONAL SCENE

in TEXTILES...

no other type of container handles materials so surely... or so gently!

Kennett Receptacles are unsurpassed for safe, sure, clatter-free handling of delicate yarns, fabrics and finished garments. They're made of National Vulcanized Fibre, a material amazingly light, tough, smooth, durable.

If you don't know these standbys of the textile field, it will pay you to check into them now (whatever your materials handling problem). Kennett Receptacles are made of National Vulcanized Fibre . . . not a paper, but a chemically-made fibre that is one of the strongest materials per unit of weight that ever went into a container.

Kennett Receptacles can be slammed, banged, stacked, knocked and abused in mills, warehouses, stores, stockrooms and on production lines and they'll come back for more. Vulcanized Fibre won't split, crack, dent, crush, crumple, blister or rust. It's strong, yet so amazingly sleek, resilient and shock-absorbing that Kennett Receptacles are the choice for safe handling of delicate materials, components and products in almost every industry.

There is a full line of sizes and types: roving cans, trays, tote boxes, barrels, cases and multi-purpose trucks available, even in a fire-resistant fibre if you wish. Or, name your special requirement and Kennett can provide it.

Write direct to Dept. W-7 today for our comprehensive booklet. If you'll name the use you have in mind, we'll be glad to tell you specifically how we can help.

NATIONAL VULCANIZED FIBRE CO., Wilmington 99, Del.

In Canada: NATIONAL FIBRE CO. OF CANADA, LTD., Toronto 3, Ontario

SHORTS & REMNANTS

(from page 10)

Journal: "Cannon fine muslins! $168. Reduced for a limited time only." We knew that textile prices had firmed, but we didn't know they were THAT firm.

TI Is the Most

"I would like to inform you that your magazine is always read with a great deal of interest and we are pleased to see that you are continuing to devote the major portion of your pages to technical matters. Some of the textile magazines published in the U.S.A. seem to be more interested in describing matters of general interest and it is difficult to find any useful information on the operating side. In consequence they are becoming less and less useful to the practical mill man and we should like to feel that your magazine will continue with the present policy."

J. BAINES
Factory Manager
Sao Paulo Alpargatas S.A.
Sao Paulo, Brazil

"You will be interested to know that a couple of weeks ago I was at [a meeting] of the Association of Special Libraries and Information Bureaux at I.C.I.'s Terylene Centre in Harrogate. This was a special meeting of their Textile Group . . . all were textile specialists. Three of them, including [the librarian for a large machinery group] said in no uncertain terms that they felt that . . . TI was now the best and certainly the most interesting American publication they received!"

NAME WITHHELD
(England)

► And **Harold Wolfson** of Ruder & Finn, Inc., PR firm for Arnold Print Works, phoned from New York to tell us that he'd heard our series of articles, "Magog Standardizes Printing," TI for Jan., Feb., and Mar., 1959, was a "classic." Wanted some tear sheets.

New Light on Combing

If you've been wondering just when a combed yarn is a combed yarn and when it isn't, hear **J. F. Bogdan** of the School of Textiles, N. C. State College, speaking at the recent Cotton Research Clinic:

"By definition, a combed yarn is one which has been spun from stock processed through a comber . . .

(Continued on page 14)

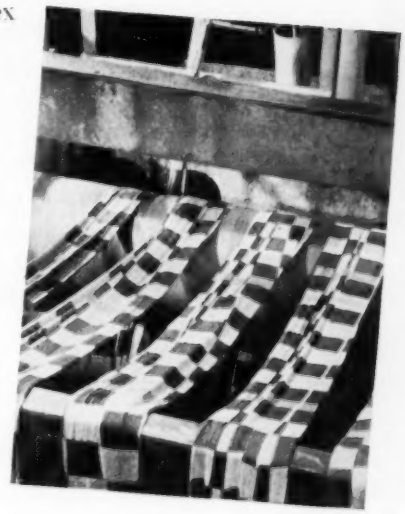
News about LUREX®

Caustic-resistant Lurex

This new caustic-resistant metallic yarn is a modification of Lurex MF (polyester-foil type).

Designed to increase your profit opportunities, it:—

- Provides a greater margin of safety against caustic degradation during cotton bleachery operations.
- Is economically advantageous (Lurex MFCR costs no more than regular Lurex MF). Extends the use of Lurex to perform in a standard cotton bleachery cycle.
- Stands up under a full-white, continuous peroxide bleach; mercerizing; continuous vat and sulphur dyeing as well as jig dyeing.



See your nearest Lurex salesman about ordering this new caustic-resistant Lurex.

Lurex, non-tarnishing metallic yarn made only by the Textile Fibers Department of

DOW

The Dow Chemical Company • ***Williamsburg, Virginia*** • ***New York: 350 Fifth Avenue***

Boston • Camden, N. J. • Charlotte, N. C. • San Francisco

Manufacturing Affiliates in Canada: William B. Stewart & Sons, Ltd., Toronto and Montreal

Save MATERIAL! Save TIME!

get MORE PRODUCTION

from your tenter frames . . .

GPE Controls

CLOTH GUIDE

Run tenter frames and other production machinery faster . . . and turn out better work. GPE Controls Cloth Guide lets you pin or clip more accurately, more surely . . . actually improves product quality while you cut production costs. Get the facts about this inexpensive way to modernize old equipment and insure top production from new equipment.

- for jobs of any size . . . smallest to largest
- most accurate tenter frame control
- completely non-contact . . . nothing touches the cloth
- ideal for all kinds of cloth, from the lightest scrims to the heaviest woolens.
- adaptable to any kind of machine
- air-sensing or photoelectric models . . . all with simple, low-cost hydraulic power
- the only cloth guide made by automatic control experts

Mail coupon for the FACTS

GPE Controls | A GENERAL PRECISION COMPANY

GPE Controls, Inc. (Subsidiary of General Precision Equipment Corp.)
260 East Ontario Street, Chicago 11, Illinois

Send me FACTS about GPE Controls cloth guides. I am interested in controlling .....(make of tenter frame) or a .....(other type of machine).

Name ..... Title .....

Company .....

Address .....

City ..... Zone ..... State .....

SHORTS & REMNANTS

(from page 12)

According to this definition, legally, one can throw cotton through the slats of a picket fence, and if one has taken the precaution to hang on that fence a sign reading 'Comber,' one can sell the product of the cotton which reaches the other side at a high premium: which leads to the topic of 'scratch combing' . . . or fiber exercise . . ."

►Ad for another department store: "15 men's wool suits . . . $9.00—they won't last an hour!" We always said that rapid obsolescence might help textiles, the way it did automobiles.

Family Album

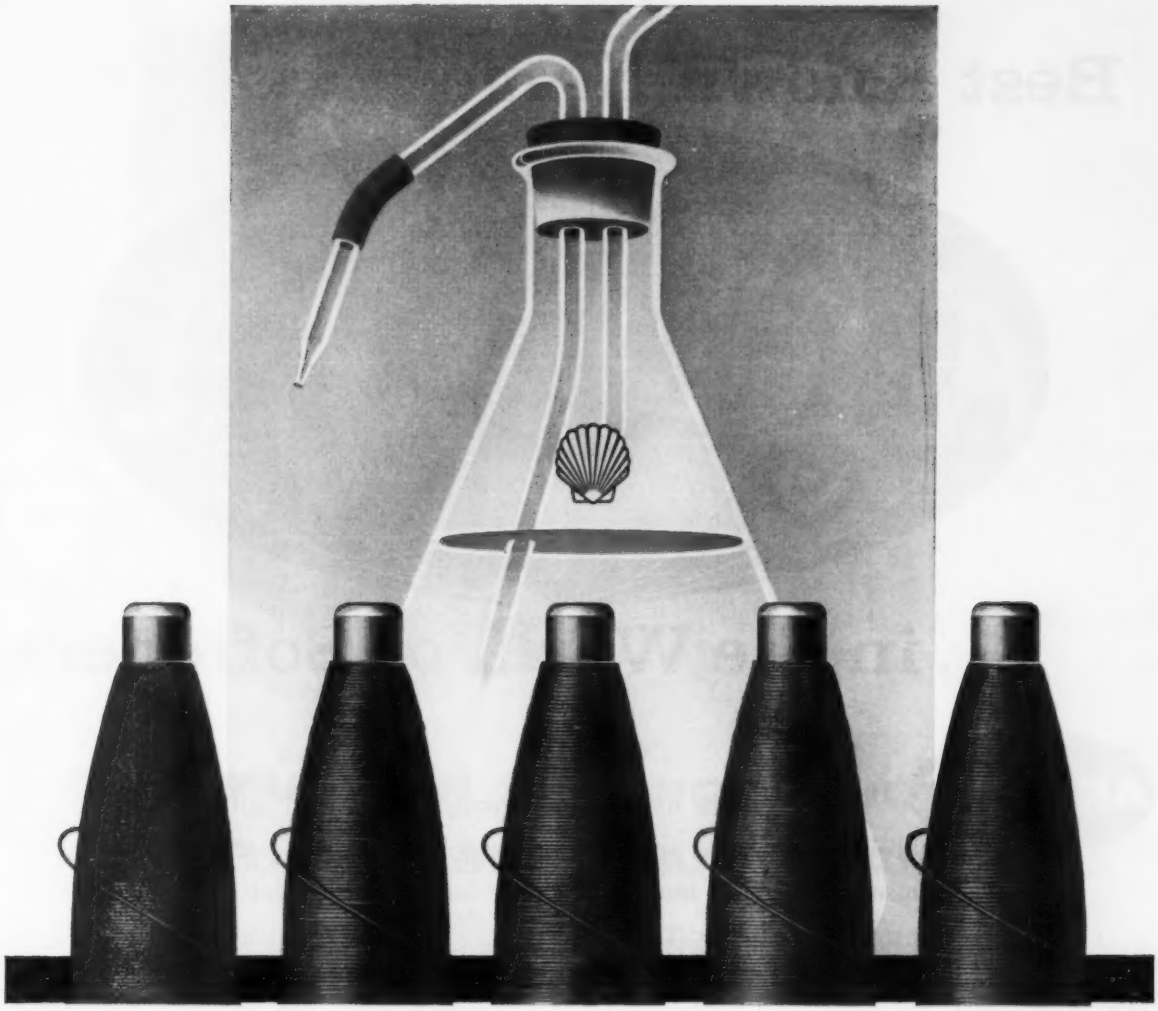
A note attached to a photograph came across my desk the other day from **Walter Mitchell, Jr.,** TI's ad manager. Mincing not a word, it said, "Please print this, for nepotism's sake." So, for nepotism's sake, here is that affable purveyor of looms and such, **Walter Mitchell, Sr.:**

Truthfully, the real reason for using the picture was the presence of the charming executive secretary of American Textile Machinery Association, **Mildred Andrews.** It gives us another chance to remind you to make your plans now to attend ATMA's big machinery show in Atlantic City next May.

Oh, yes. What are they looking at? Well, **George Terborgh,** research director of Machinery and Allied Products Institute, was at the left of the picture, but there was no room for him in this narrow column. However, we'll hold his picture pending a request from George Terborgh, Jr.

► The Army reluctantly admitted, under pressure from a Congressional

(Continued on page 22)



How Shell Chemical serves the textile industry

Chemicals play a vital role in the textile industry. Having the right chemical for the job helps produce *better* fabrics. Shell Chemical is a convenient, dependable source for the chemicals listed at the right.

Hydrogen peroxide serves as a rapid, economical bleach and as an oxidizer for making vat colors brighter. Acetone is a spinning solvent for acetate rayon. Glycerine is a popular moistening agent for fibers and for textile printing compositions.

Eponite® 100 is a very effective, non-chlorine retentive resin for production of minimum-care fabrics. It imparts increased wrinkle resistance to cottons and rayons and reduces rayon shrinkage to a fraction of one per cent.

• • •

A Shell Chemical representative will be glad to discuss your specific needs. Write your nearest Shell Chemical district office for samples and technical literature.

Acetone
Eponite 100
Ethyl Alcohol
Glycerine
Hexylene Glycol
Hydrogen Peroxide
Isopropyl Alcohol
Methyl Ethyl Ketone
Methyl Isobutyl Ketone
Sodium Sulfonates

SHELL CHEMICAL CORPORATION
INDUSTRIAL CHEMICALS DIVISION

Atlanta • Chicago • Cleveland • Detroit • Houston • Los Angeles • Newark • New York • San Francisco
IN CANADA: Chemical Division, Shell Oil Company of Canada, Limited, Montreal • Toronto • Vancouver

SHELL

Best Known Name

. . . in the World of Softeners

AHCOVEL . . . a name which has become synonymous with quality finishes for natural and synthetic textiles. Ahcovel . . . recognized throughout the world as the leader in the field of substantive softeners. The reason:

AHCOVEL SOFTENERS PRODUCE THE DESIRED RESULTS

- Full-Bodied Softness
- Durability
- Economy
- Soil Resistance
- Resin Compatibility
- Resistance to Scorch
- Static Resistance
- Lubricity
- Non-Chlorine Retention

for superior substantive softening . . . there's an AHCOVEL to supply the answer

Quality AHCO PRODUCTS Integrity

ARNOLD, HOFFMAN & CO., INCORPORATED

55 Canal Street, Providence, Rhode Island • Est. 1815

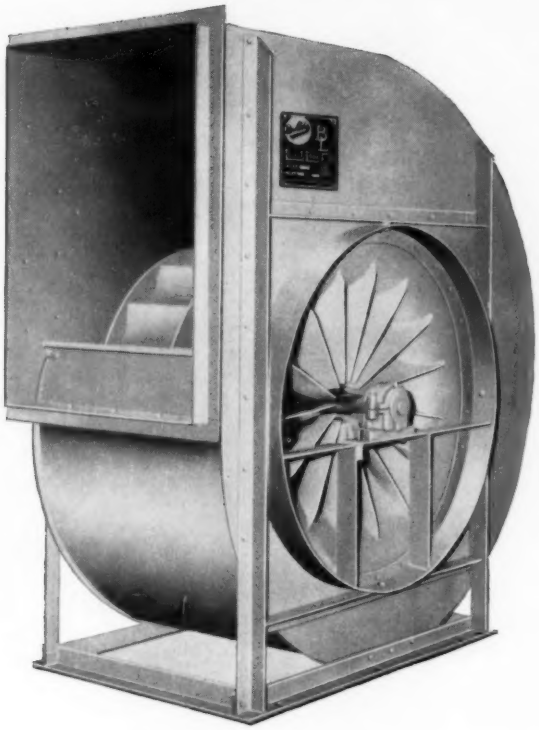
A Subsidiary of Imperial Chemical Industries Limited, England

West Coast Representative: Chemical Manufacturing Company, Incorporated of California

ICI

171-9

AHCOVEL — registered trade name



"Buffalo" Type "BL" Fan For Supplying Ventilating, Air Conditioning & Air Cleaning Systems.

MAXIMUM AIR MOVING EFFICIENCY WITH MINIMUM MAINTENANCE

Quiet, efficient, economical operation of the "Buffalo" Type "BL" Fan in general air moving service is assured by these superior "Buffalo" engineering features:

- The smoothly-curved true half circle inlet bell holds turbulence to a minimum. Fixed directional guide vanes are standard; variable inlet vanes are optional.
- Streamlined wheel with backward curved blades attains peak efficiency. All wheels are factory tested and balanced to minimize vibration.
- Smoothest possible air flow is enhanced by the correctly shaped scroll of the wheel-contoured housing.
- "Buffalo" designed non-overloading factor provides stable, quiet output from free delivery to shutoff.
- Rugged "Buffalo" construction (extra-heavy at points of greatest strain and wear) insures unsurpassed dependability and long, maintenance-free life. This, in turn, results in the absolute minimum maintenance time for which all "Buffalo" products are noted.

Be sure to investigate the "Buffalo" Type "BL" Fan for your Class I and II air moving jobs. Call your nearby "Buffalo" engineering representative, or write for Bulletin F-104.

"Buffalo" Fans bring you the famous "Q" Factor — the built-in QUALITY that provides trouble-free satisfaction and long life.

BUFFALO FORGE COMPANY
Buffalo, N. Y.
Buffalo Pumps Division, Buffalo, N. Y.
Canadian Blower & Forge Co., Ltd., Kitchener, Ont.

VENTILATING • AIR CLEANING • AIR TEMPERING • INDUCED DRAFT • EXHAUSTING • FORCED DRAFT • COOLING • HEATING • PRESSURE BLOWING

National® CARBANTHRENE® Dyes

are everything you demand in today's versatile vat dyes!

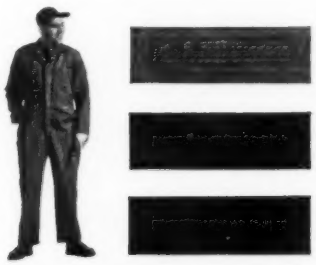
With automatic washers and the popularity of wash-and-wear, vat dyes are in growing demand for everything from denims to draperies and the finest fashions.

As production of vat-dyed fabrics increases, time-consuming application methods are replaced by new techniques. Continuous pad-steam and pigment impregnation dyeing processes require vat dyes of vastly improved dispersibility.

That's why modern Carbanthrene Vat Dyes are the first choice of an increasing number of leading mills for cottons and viscose.

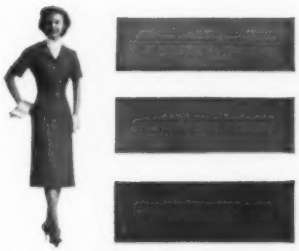
Fine-particle Carbanthrenes assure cleaner, brighter dyeings time after time. Piece goods are level and free of speckiness. Packages are penetrated thoroughly and evenly. Processing troubles are minimized.

Carbanthrene Vat Dyes are amply stocked near textile-producing centers. We will be glad to arrange a trial in your mill at your convenience.



CARBANTHRENE DIRECT BLACK 3G DOUBLE PASTE

Especially recommended for charcoal and other greys in work clothes and wash-wear fabrics. Outstanding for wash and light fastness. Ask for Bulletin 442.



CARBANTHRENE SCARLET RBB PASTE

New addition of the Carbanthrene range that is ideal for warm pink tones in dress goods, upholstery and drapery fabrics. Request Bulletin 449.

Member of VAT DYE INSTITUTE

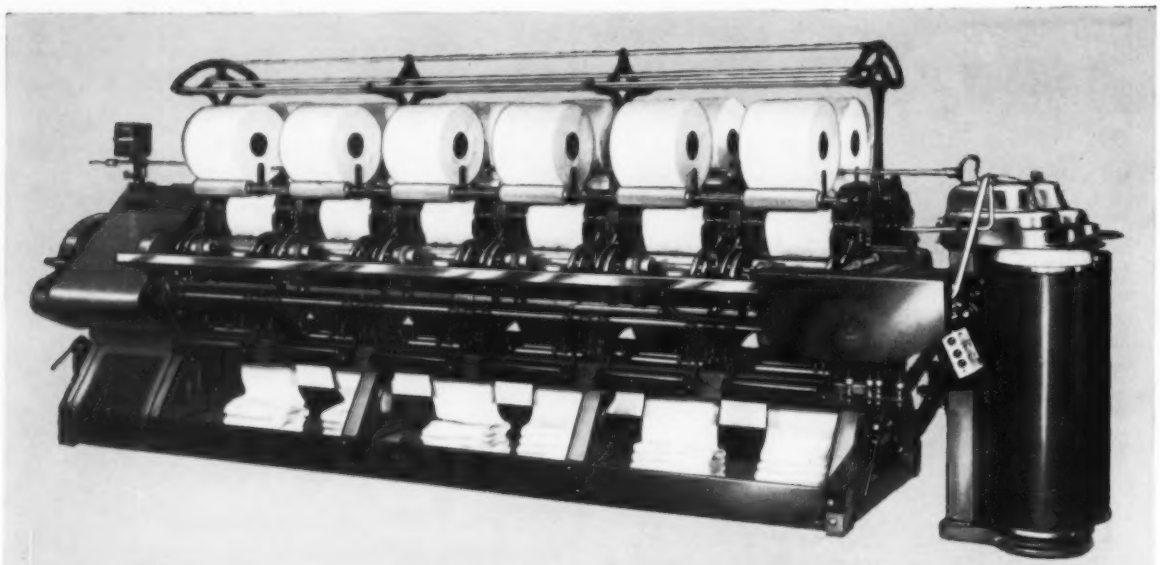
NATIONAL ANILINE DIVISION

40 RECTOR STREET, NEW YORK 6, N. Y.

Atlanta Boston Charlotte Chicago Greensboro Los Angeles
Philadelphia Portland, Ore. Providence San Francisco

In Canada: ALLIED CHEMICAL CANADA, LTD., 100 North Queen St., Toronto 14

Allied Chemical



SACO-LOWELL COMBERS GIVE
Highest production
Highest quality

NOW PRODUCING UP TO 75 LBS. PER HOUR FOR LOW NOIL COMBING AND UP TO 60 LBS. PER HOUR FOR QUALITY COMBING

Saco-Lowell combers are double sided allowing independent operation of each side with SIX DOUBLINGS PER SIDE

OBTAIN THESE PROFIT MAKING ADVANTAGES

1. Precise control of noil removal from 6% to 25% depending on cotton being processed.
2. Ability to comb cotton from 7/8" staple to the finest Egyptian.
3. No cams in head motion. Positive gearing throughout maintains constant, precise settings.
4. Consistently high combing and detaching efficiency.
5. Highest production per unit of floor space, per horsepower, per man hour.

THE STANDARD OF QUALITY AND PERFORMANCE Since 1813

SACO-LOWELL TEXTILE MACHINERY DIVISION

SACO-LOWELL SHOPS

Executive & Sales Offices — EASLEY, S. C.

Branch Sales Offices — ATLANTA, GA., BOSTON, MASS., CHARLOTTE & GREENSBORO, N. C. & GREENVILLE, S. C.

Who . . .

can now afford not to modernize?

The headlines tell the story. Today's most successful mills are those actively engaged in modernization programs. Such companies take full advantage of the savings and cost reductions made possible by advanced machines and methods.

Fortunately, such modernization doesn't always involve widespread replacement of present equipment. For example, many progressive companies completely revitalized their weaving operations at surprisingly low unit cost, simply by installing UNIFIL® Loom Winders *on their existing looms.*

By so doing, they brought the entire process of filling yarn preparation right to the looms. UNIFIL Loom Winders wind the quills, load the shuttles, strip and return empty quills to the winders — all in one continuous, automatic cycle.

Obviously, the combined savings made possible by such a system can't help but speed up pay-off of the investment.

Small wonder then, that by the end of 1959, UNIFIL-equipped looms will be weaving in excess of half a billion yards of cloth per year. The reasons are simple and profitable: lower weaving costs . . . improved fabric quality . . . greater loom versatility. Have *you* looked into UNIFIL Loom Winders' story?

A few of the many progressive companies that are modernizing with Unifil Loom Winders

Amerotron Corporation
Berkshire-Hathaway, Inc.
Burlington Industries, Inc.
Cannon Mills Company
Cone Mills Corp.
Dover Mill group
Drayton Mills
Exposition Cotton Mills Company
Greenwood Mills
Judson Mills
Laurens Mills
Marion Manufacturing Co.
Ponemah Mills
Riegel Textile Corp.
J. P. Stevens & Co., Inc.
United Merchants and Mfrs.
Woodside Mills

The Versatile Weave Room is the Unifil®-Equipped Weave Room

23.8.56A

UNIVERSAL WINDING COMPANY

P.O. BOX 1605, PROVIDENCE, R. I.

BOSTON · PHILADELPHIA · CHARLOTTE · ATLANTA · LOS ANGELES · MONTREAL, HAMILTON, CANADA

INSTANT COFFEE, TEA, MONEY...

INSTANT BOBBIN SERVICE!

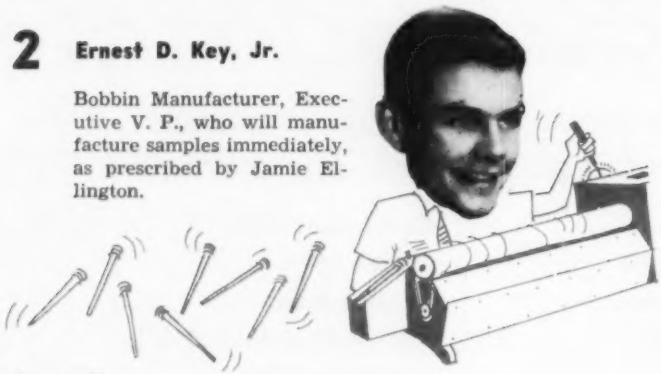
Here's how it works: You pick up your telephone and call Monticello, Ga., 2111-2121. Tell us what the problem is and relax . . . you have INSTANT BOBBIN SERVICE. Two things happen immediately:

1 **James Ellington**

Bobbin Consultant, Textile Engineer gets himself into (or onto) the fastest means of transportation headed for your mill. He will diagnose the trouble and call . . .

2 **Ernest D. Key, Jr.**

Bobbin Manufacturer, Executive V. P., who will manufacture samples immediately, as prescribed by Jamie Ellington.



This team will:

Utilize your present bobbins if possible
Suggest ways to add up to 15% more yarn on package
Solve sticking or loose bobbin problems
Design bobbins for style change
New Equipment and Bobbin Designs
Anti-sloughing Quill Grooves
Quill Bunch Position Rings — New

Monticello Bobbin Company

MONTICELLO, GEORGIA

South's only Complete Bobbin Manufacturer

We Service and sell Direct

P. O. Drawer 230 Phone 2111 - 2121 Monticello, Georgia

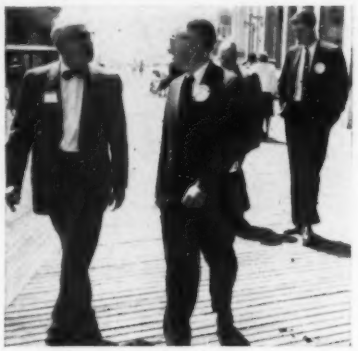
SHORTS & REMNANTS

(from page 14)

Committee, that it has enough cotton duck in storage to cover 16,447 acres. And, naturally enough, it wants to buy more.

More for the Family Album

To keep peace in the **Mitchell** family, we've decided that we'd better give a little space to **Walter, Jr.** So here he is enjoying the sun and salt on the boardwalk at Atlantic City during the recent Knitting Arts Exhibition. He's the tall young man in the right rear.



In the left foreground is **G. M. Lang** of National Vulcanized Fibre, strolling along with TI representative **Jim Corgee.** With **Walter** is TI's Boston rep, **Art Shaw.**

Hand in Glove

"On page 67 [TI for May] you show a glove manufactured from 'Duro-Suede,' made by the Graniteville Co. . . . Advise us of their address."

D. D. TRIMBLE

Jomac, Inc.
Phila., Pa.

New Finishing Plant?

"The group with whom I am associated is conducting an evaluation of bleaching processes with the thought of establishing a bleaching and finishing plant in New York's Hudson Valley . . . information concerning . . . 'Rotomatic' steamer as described in J. B. Goldberg's article 'Textile Research Achievements in 1958' in the March issue . . . "

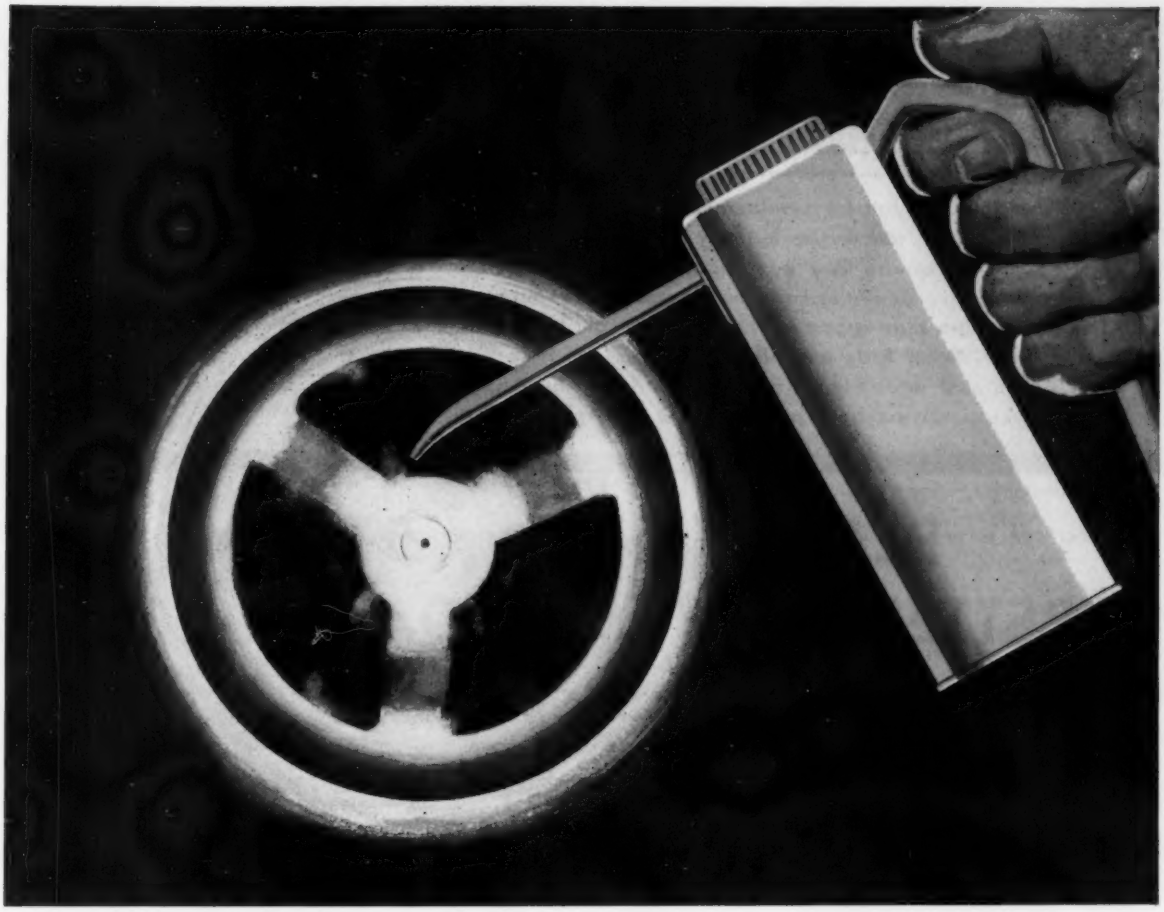
PHILLIPS T. MORTON

Wappingers Falls, N.Y.

To Save Early Woolen Mill

We read in *The Houghton Line* that a group of technical men at

(Continued on page 26)



Setting new standards in textile machine lubrication

NEW SHELL VEXILLA OILS

To assure high compatibility with today's synthetic fabrics, a completely new line of premium-quality textile machine lubricants has been developed—NEW SHELL VEXILLA OILS. These new oils are available in a wide viscosity range to satisfy all operating requirements.

Check these outstanding advantages:

1. Excellent Scourability—New Vexilla® Oils are *easily* and *readily* removed through conventional scouring procedures . . . completely eliminate oil stain problems.

2. High Oxidation Resistance—New Vexilla Oils contain special oxidation inhibitors to prevent increase of viscosity during service and storage. High viscosity index base oils minimize thinning out at high temperatures.

3. Eliminate Bearing Corrosion—New Vexilla Oils contain a newly developed rust inhibitor which keeps bearings *clean* and *free from corrosion.*

4. Non-Gummy—New Vexilla Oils contain no fixed oils such as lard, tallow and sperm oils to cause gumming. In automatic lubricating systems, they will not form harmful metallic soaps when in contact with zinc or copper.

5. Outstanding Wetting Properties—New Vexilla Oils offer superior metal-wetting properties because of the carefully engineered balance of components and polar character.

The Shell Industrial Products Salesman will be glad to show you how to reduce maintenance costs and assist in the selection of the appropriate grades for *your* plant operation. Write Shell Oil Company, 50 West 50th Street, New York 20, New York. In Canada: Shell Oil Company of Canada, Limited, 505 University Avenue, Toronto 2, Ontario.

NEW SHELL VEXILLA OILS

. . . quality textile machine lubricants

SHELL

DOW | **Chemicals**

make textile news and profits

To report in detail all developments in all fields of chemistry that affect the textile industry would require a good sized press, running day and night. Here you find highlighted a few developments, new and old, about seven chemicals that play a part in the quality or production costs of textiles. Other facts and other chemicals will be covered in subsequent advertisements in this series. To keep in the know, keep tab on both pages of this and following ads.

You may wish to check certain items in this advertisement and forward to those concerned in your company.

ROUTE TO:

_____

_____

_____

_____

_____

PLAQUEMINE . . . 5+9= BETTER CAUSTIC SODA SERVICE

Completed only last October, the plant at Plaquemine, Louisiana, is already giving textile men (who realize the importance of assured source of supply) reason to double-check their present sources.

Using ultra-modern equipment and methods, this multimillion dollar installation brings to five the number of caustic soda production plants operated by The Dow Chemical Company. With the nine Dow shipping terminals, it brings to fourteen the number of points from which top quality caustic is available for immediate delivery.

The advantages to textile men are many, both now and in the future.

In the last two years, quiet plantation land along the Mississippi River, thirty miles north of New Orleans, has been changed to a teeming spic-and-span industrial center where caustic soda and other vital chemicals are produced with modern efficiency and precision.

Dow cordially invites members of the textile industry to pay a call at Plaquemine and personally view this new source for many important textile chemicals. The effective use of natural resources appeals to the efficiency-minded: natural gas, piped from nearby fields, furnishes fuel for power and heat; water for cooling and processing is readily available from the Mississippi as it flows by the door. It is something worth witnessing: every requirement for efficient production of the finest caustic soda is concentrated here in one plant.

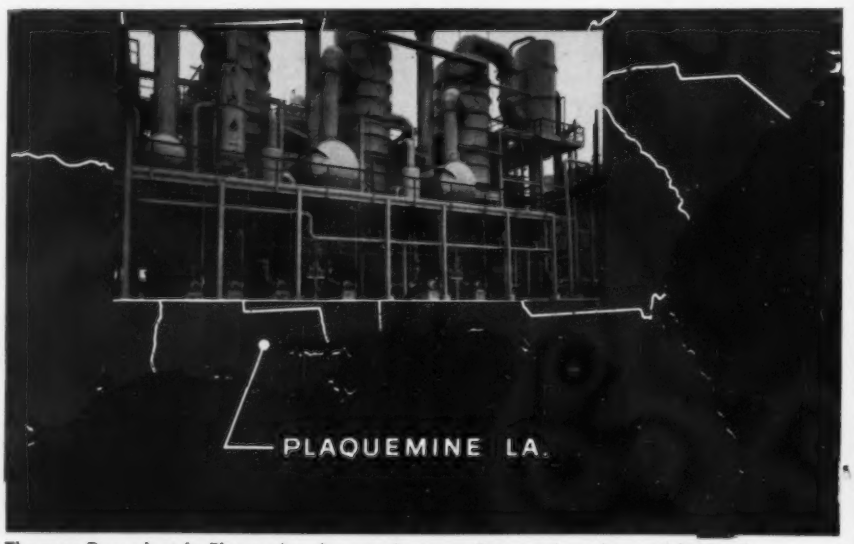
Textile management: the long view. A poll of men in textile mills, both large and small, will make these things clear:

- A dependable shipping source for caustic soda is important for efficient inventory control and economical manufacture.
- A dependable manufacturing source for top quality caustic soda is essential for long range planning. Regardless of what may develop nationally or internationally, a *sure* supply is necessary.

With five production plants—located in Michigan, Texas, California, Ontario and now Louisiana—Dow provides the best possible answer to the question of assured supply. And Dow's nine shipping terminals—each completely stocked and staffed for fast delivery—furnish a time-tested solution to the problem of dependable delivery.

In planning ahead, the textile executive finds there is another important consideration: Dow is widely accepted as the reliable source of supply for caustic soda in every form—50% and 73% solution, standard flake, solid and ground forms.

New basic guide for NaOH buyers. The comprehensive Dow Caustic Soda Handbook discusses properties of



The new Dow plant in Plaquemine, La., produces quality caustic soda, used by textile mills for kiering, for bleaching and mercerizing, for changing the "hand" or feel and producing a sheer finish.

NaOH, its uses, forms, shipping and handling data, and methods of analysis. Everyone in the textile industry connected with the use of this basic chemical should have a copy. Ask your Dow sales representative for your copy, or write Dow.

• Boon to cotton fabricators

Even whites resist wrinkles with EDA 98%

The latest improvement in ethylenediamine resins enables mills to fabricate cottons in pastel colors, even white, so they are not only wrinkle-resistant, but have excellent wrinkle recovery properties. Higher color retention in the finished fabrics, along with improved dimensional and storage stability, may also be obtained using EDA-derivatives.

The product that makes this possible is EDA 98%, pioneered by The Dow Chemical Company. Its quality and purity surpass anything previously achieved, making it the ideal base for ethylenediamine resins used in treating finished cotton. So pure, you can look through a bottle of EDA 98% almost as easily as through a plate glass window. This purity pays off with any cotton fabric but especially light colored or white fabric where true, pure tones are required for the important high style market which includes dress shirts, blouses, summer dresses and skirts.

The greatly improved resins from high quality EDA, the result of years of extensive research in the Dow laboratories, are attracting the attention of foremost cotton fabricators both in this country and abroad.

• Dowicide G . . .

Textiles get an assist from chemistry

The preservation of starch solutions used by textile mills for warp sizing took a long step forward with the discovery of Dowicide® G, one of a family of industrial preservatives developed for the control of bacteria and fungi. Dowicide G (technical sodium pentachlorophenate) added to starch sizing prevents breakdown in vats and stops mildew damage in gray goods. By eliminating mildew, this modern preservative marks up a double savings. It saves fabricating time. And it saves the extra costs created by increased bleaching that's caused by mildew damage. Dowicide preservatives also effect important savings by preventing mildew and rot in carpet yarns; resisting rot in rope and bale twine and coated burlap; as well as preservation of cotton, rayon and silk yarn. Dow has experience-in-depth with each of these applications—you are invited to write for detailed information on your particular problem.

★ ★ ★ ★

LEARN MORE ABOUT CHEMICALS that are advancing textile production, reducing production costs. Dow is an authoritative source for information about textile chemicals as well as a reliable source for the chemicals themselves. Write THE DOW CHEMICAL COMPANY, Midland, Mich., Chemicals Sales Dept. 981FZ7

Dowicide preservatives help prevent damage in goods subject to mildew and rot.

NEWSWORTHY NOTES

DOWANOL. Latest information about the most complete line of glycol ether solvents for dyeing is in a free folder and booklet on Dowanol® products.

GLYCOLS. Mono-, di- and triethylene glycol are three industrial glycols proved outstanding as fiber lubricants and as snagging or drying preventatives.

CHELATING AGENTS. Textile men use Dow triethanolamine to reduce iron staining; Versene®, Versenol® and Versenex* for other cost-cutting applications.

*TRADEMARK

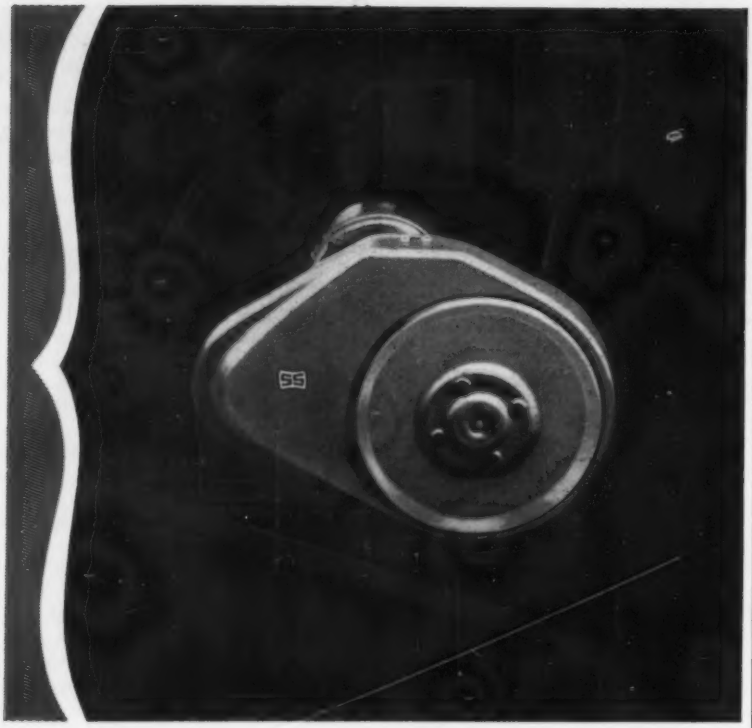
DOW LATEX. In many applications, from carpet backing to hair-pad binding, Dow Latexes are cutting costs and providing improved product features.

DOW CHEMICALS BASIC TO THE TEXTILE INDUSTRY

Chemical Raw Materials
Bleaching Chemicals
Preservatives • Plasticizers
Glycols and Derivatives
Methylcellulose • Emulsifiers
Solvents • Aromatics
Caustic Soda
Muriatic Acid • Latexes
Chlorine • Soda Ash

THE DOW CHEMICAL COMPANY
Midland, Michigan

DOW



SOUTHERN STATES CD-2 CARD DRIVE COMBINES INTO ONE UNIT ALL OF THE FEATURES WANTED FOR COTTON CARDS

Here is why we honestly believe the Southern States CD-2 Card Drive is the safest, simplest, most efficient individual drive on the market today:

Finger-tip control. No changes in operating procedure. Unit is controlled by simple clutch lever in both starting and hand stripping.

Full speed in seconds. A 1½ hp high torque card motor brings card into full operation, seconds after clutch is engaged.

Safety engineered. All belts and moving parts are covered. Starting and idling is accomplished by simple clutch lever.

Rugged construction. The entire unit is built for heavy-duty service: steel main stand; cast iron jackshaft bracket and main pulley; cast aluminum cover. Ball bearing throughout.

Easy installation. Fits any cotton card. Minimum number of holes to drill in frame. Drive pulley, collar and clutch are preassembled and slip on to shaft using existing keyway.

Get the facts from your Southern States representative or write for Bulletin 301-a.

SOUTHERN STATES
EQUIPMENT CORP.
HAMPTON, GEORGIA

SHORTS & REMNANTS

(from page 22)

Allis-Chalmers have purchased the Old Watkins Mill, near Independence, Mo., and plan to restore it as a museum dedicated to pioneer American industry. The old woolen mill is part of a plantation established in 1830; it closed its doors in 1870. Associate memberships in the group are being issued at $5.00 per year. Further information, including a list of individual and corporate members, can be obtained from Watkins Mill Association, Box 112, Independence, Mo.

Photographer Photographed

Bill Coxe of Greenville, S. C., who has had countless textile-mill pictures published in TI and every other textile magazine, finally stopped long enough for his daughter Isabelle to take his picture. Here it is as it appeared with a feature story in *The State*, Columbia, S. C.

While **Bill** is best known to TI readers for his textile pictures (the murals in the Municipal Airport at Greenville, for example), he is perhaps even better known to the public at large as an aerial photographer, at which he was a pioneer; as a photographer of the famous and near-famous; and as a master of the studio portrait.

Merchandising Know-How

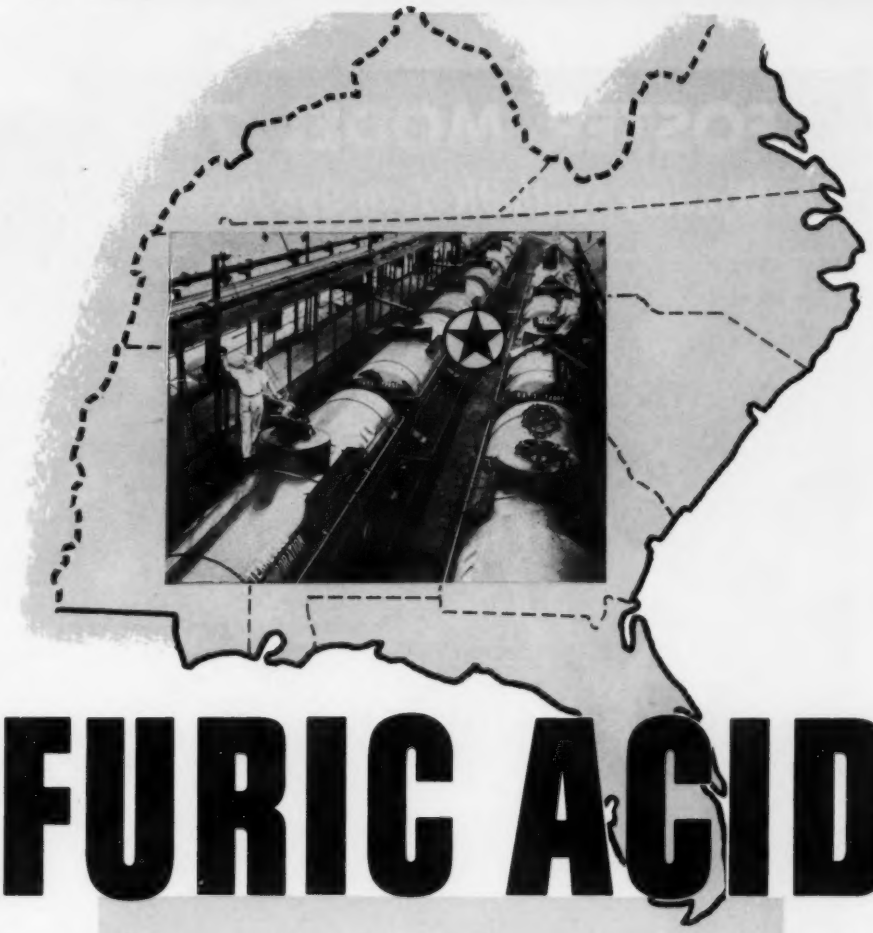
Joseph Parmet Co., manufacturer of "One-Wipe" dust cloth, believes that the desire to imitate Mother can instill habits of neatness and orderliness—and help to sell dust cloths. Along with its regular-size cloth is packed a junior-size cloth, with a list of "Household Hints for Mother's Helper" and a cleaning calendar. Good way to pep up a textile product

(Continued on page 48)

A BASIC
PRODUCER

TENNESSEE CORPORATION

FROM MINE
TO FINISHED
PRODUCT



SULFURIC ACID

TENNESSEE CORPORATION, The Southeast's Leading Sulfuric Acid Supplier

QUALITY

RELIABILITY

ABUNDANCE

RAPID SERVICE

TECHNICAL
ASSISTANCE

VARIETY OF
GRADES AND
STRENGTHS

Whether your Sulfuric Acid requirements are an occasional tank car or large tonnages, check with **Tennessee** before making your decision. You will find our acid attractively priced, high in quality, consistently available and backed by outstanding customer service gained through years of growth and experience.

Our complete control of raw materials from mine to finished product allows our total independence from elemental sulfur and enables **Tennessee Corporation** to accommodate and ship large tonnages of acid quickly and with minimum notice.

The sulfur contained in the ore we process yields Virgin Sulfuric Acid of highest quality free from organic matter, very low in iron, and in no way contaminated from regenerated or spent sulfuric acid sources.

TENNESSEE COPPER COMPANY, COPPERHILL, TENNESSEE DIVISION TENNESSEE CORPORATION,
produces all commercial grades and strengths of Sulfuric Acid from 60° Baume through the various Oleums.

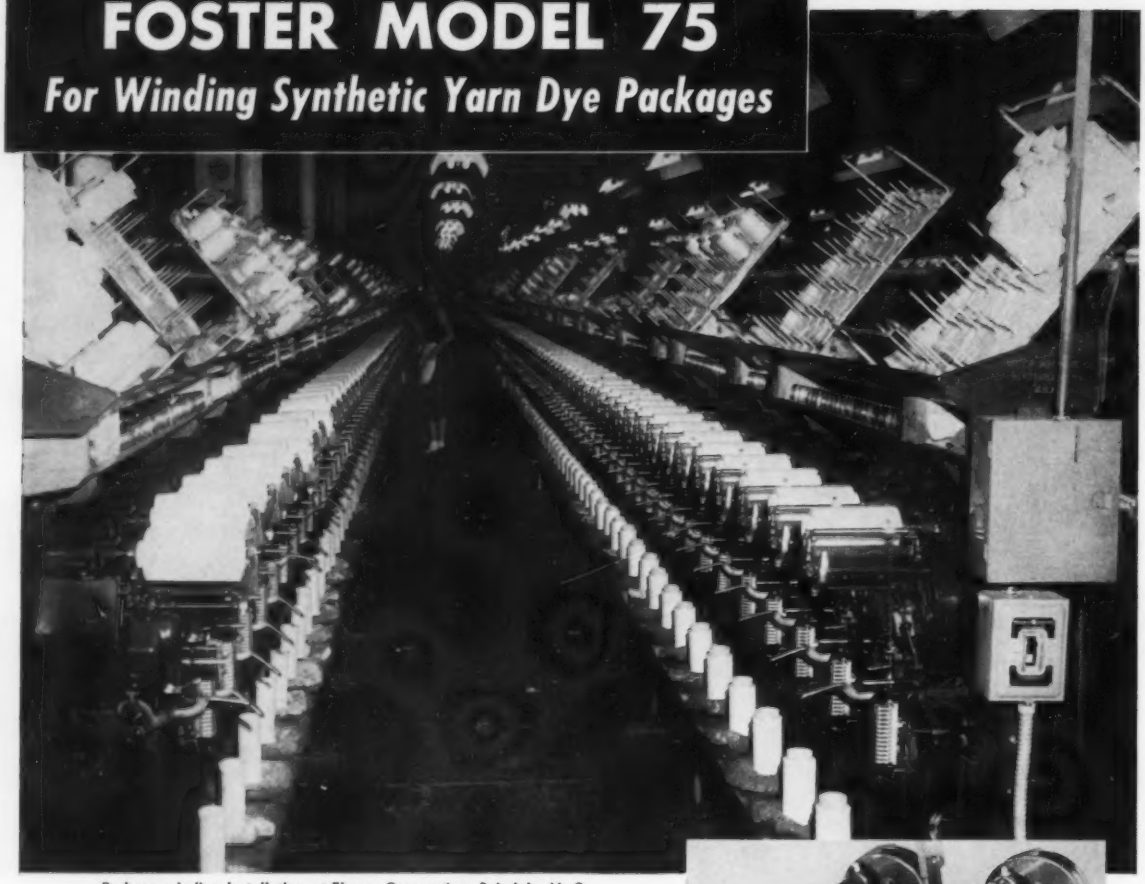
We would welcome the opportunity to tell you our story. Call Jackson 3-5024, Atlanta, Georgia or Write—

TENNESSEE CORPORATION

TENNESSEE CORPORATION
617-629 Grant Building, Atlanta 3, Georgia

FOSTER MODEL 75

For Winding Synthetic Yarn Dye Packages



Package winding installation at Elmore Corporation, Spindale, N. C.

2 FEATURES THAT PROMOTE BETTER DYEING

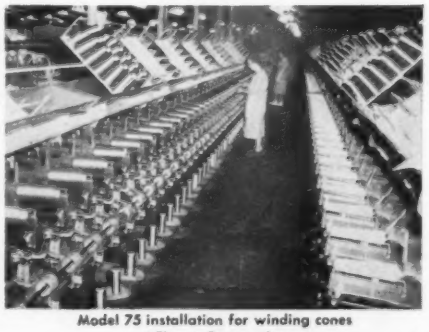
One feature is the special attachment which accurately controls the density of the package, thus permitting extra softness. This extra softness compensates for the tendency of the yarn to pack and swell when wet and permits ready penetration of the dye liquor.

The other feature is the open or honeycomb winding pattern, instead of a diamond pattern. This again promotes free circulation and thorough penetration by the dye liquor.

Special attachment for winding dye packages on Model 75.

OTHER ADVANTAGES

The Foster Model 75 has other basic advantages which make for maximum utility and high production at low cost, such as:—convertibility for cone winding, ball bearings, non-wear spindle drive, yarn oiling attachment (optional), gear gainer attachment, relatively high winding speed (up to 1500 r.p.m.) and 180° belt contact on each spindle.



Model 75 installation for winding cones at Elmore Corporation.

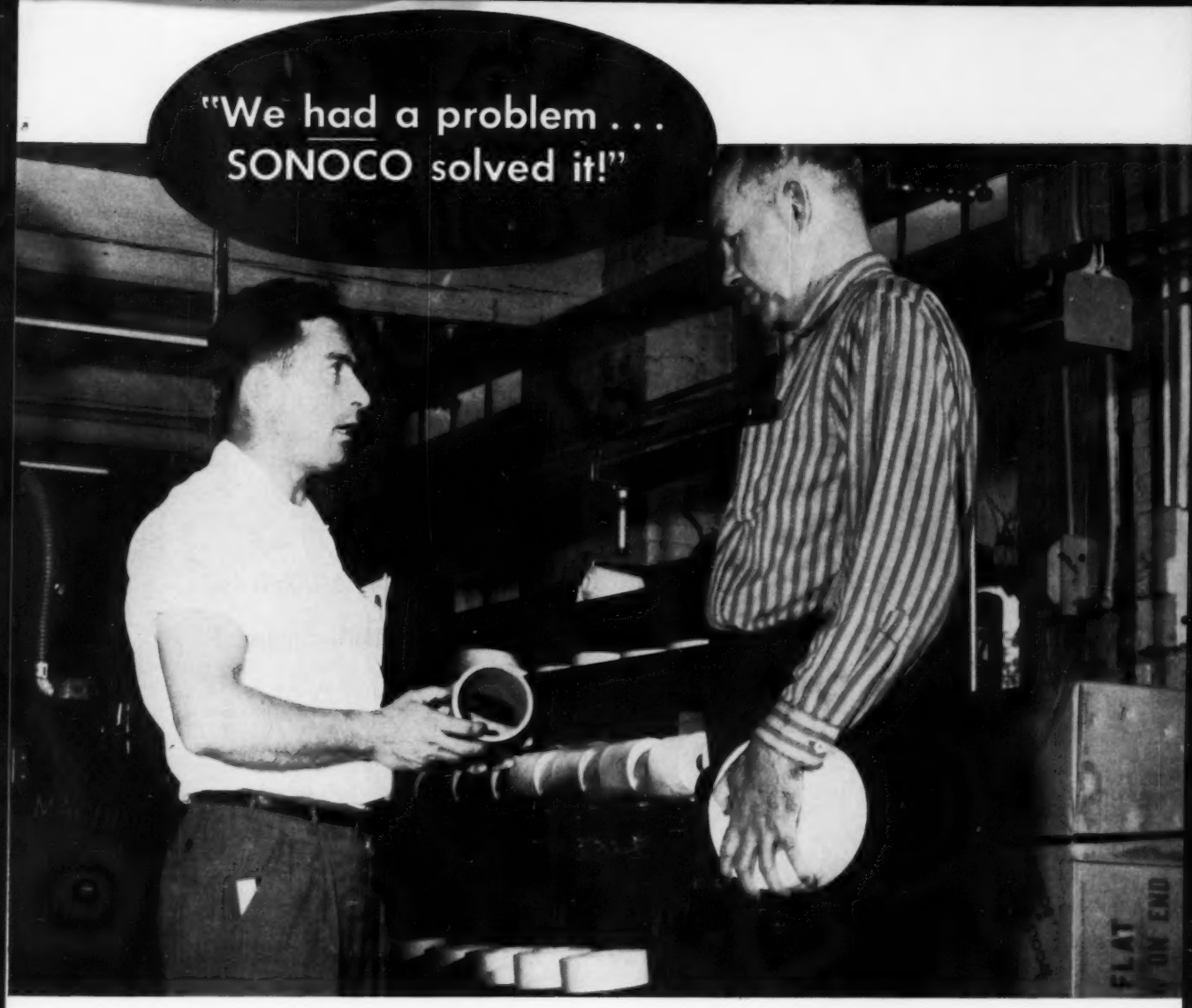
See our exhibit at Knitting Arts Exhibition — Sections 82-84 and 99-101A.

FOSTER MACHINE COMPANY

Westfield, Massachusetts, U.S.A.

Southern Office, Johnston Bldg., Charlotte, N. C. • Canadian Representative—Ross Whitehead and Co., Ltd., 2015 Mountain St., Montreal, Que. and 100 Dixie Plaza, Port Credit, Ontario • European Representative—Muschamp Textile Machinery (Sales) Limited, Elder Works, Wellington Road, Ashton under Lyne, Lancashire, England.

656-8



THE NEED: A one-time use draw winder tube

Expensive, returnable draw winder tubes were being used to package certain synthetic yarns. Because of the cost and the returnable feature of these tubes, it was desirable to replace them with a low cost, expendable carrier. This required the development of a new, close tolerance tube with a suitable surface finish. Furthermore, a tube sufficiently strong to permit its use with the complete range of deniers was required.

Sonoco's sales engineers along with the research and development departments solved the problem.

This was accomplished by the right combination of paper and adhesives and special processing. The result is a draw winder tube possessing all the required characteristics.

Only Sonoco with 60 years' experience, plus modern research and completely integrated manufacturing facilities, could solve this problem quickly with economical and efficient carriers. It is typical of countless cases where Sonoco technical and production "know-how" has benefited the industry. You can continue to depend on Sonoco!

Our 60th year
1899 - 1959

SONOCO
Products for Textiles

SONOCO PRODUCTS COMPANY

Main Office—Hartsville, S. C. • Mystic, Conn. • Akron, Ind. • Lowell, Mass. • Phillipsburg, N. J. • Longview, Texas • Philadelphia, Pa. • La Puente, Cal. • Fremont, Cal. • Atlanta, Ga. • Granby, Quebec • Brantford, Ontario • Mexico, D. F.

Announcing the New Dayton

Golden Thorobred Drop Box Picker

Amazing Synthetic Picker Lasts Up to 10 Times Longer, Multiplies Loom Savings!

You can now enjoy tremendous savings in loom downtime and picker replacement cost, with *new* Dayton-made Golden Thorobred Drop Box Pickers. During long, thorough testing, Golden Thorobred Drop Box Pickers have operated up to 10 times longer than conventional pickers, and in many cases are still running.

Furthermore, Golden Thorobreds require no oils or dressing . . . they won't abrade the picker stick, thereby extending its life . . . and they have an almost perfect cushioning action that preserves the shuttle from wear.

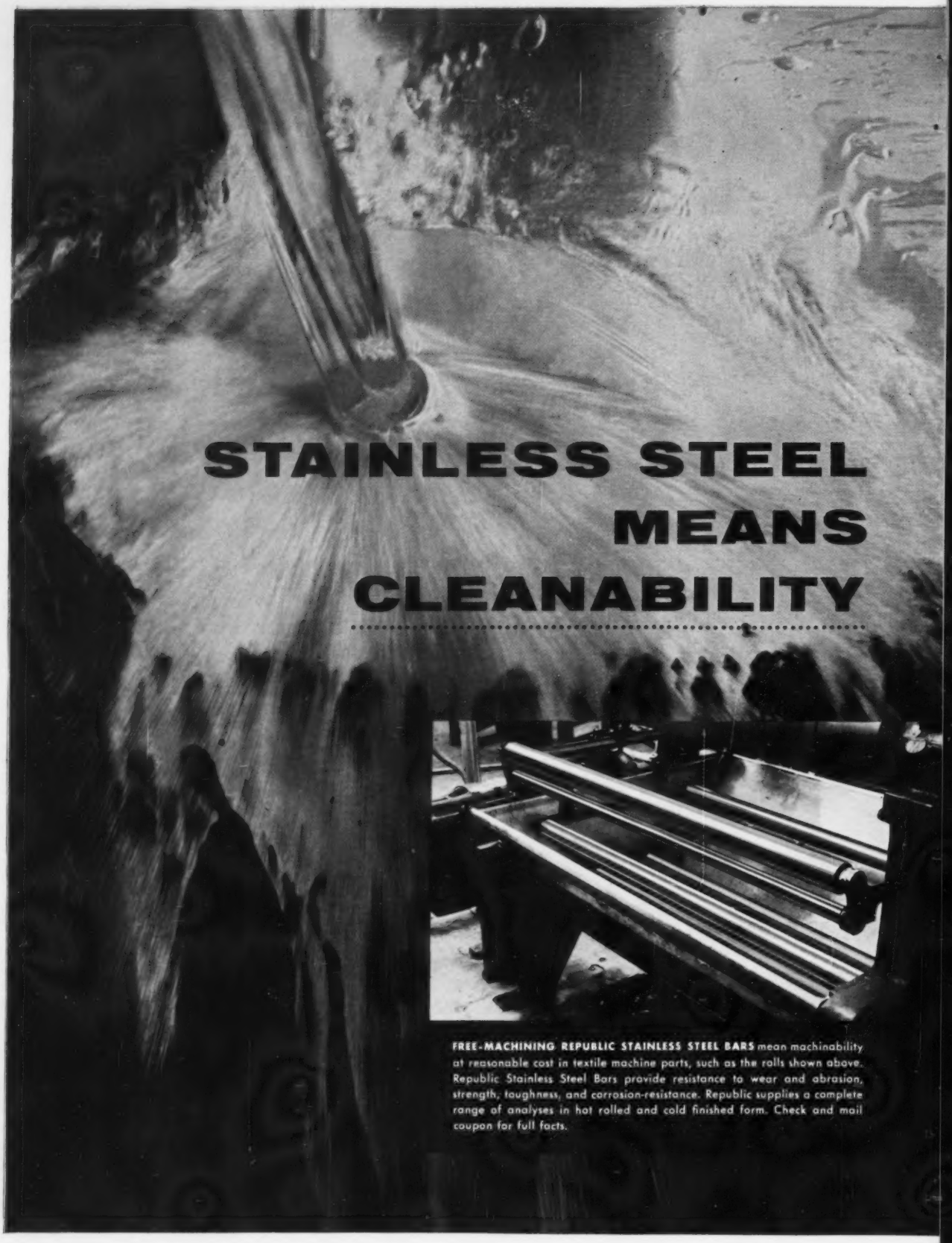
Because of their shock-absorbing resilience, Golden Thorobreds, too, help greatly to diminish the noise level on looms. And when a changeover does become necessary, Golden Thorobreds box with notable ease . . . for your further savings in labor and downtime.

Cleaner, cooler, quieter, longer running . . . Dayton Golden Thorobred Drop Box Pickers assure you outstanding performance and remarkable savings. Enjoy these new, high standards of wear-resistant operation . . . the result of six years of Dayton research and testing in synthetic elastomers. Golden Thorobreds are now available at your local Dayton jobber's . . . or write The Dayton Rubber Company, Textile Division, 401 South Carolina National Bank Building, Greenville, S. C.

Dayton Rubber

Dayco and Thorobred Textile Products for Better Spinning and Weaving

OVERSEAS PLANT, THE DAYTON RUBBER CO. LTD., DUNDEE, SCOTLAND



FREE-MACHINING REPUBLIC STAINLESS STEEL BARS mean machinability at reasonable cost in textile machine parts, such as the rolls shown above. Republic Stainless Steel Bars provide resistance to wear and abrasion, strength, toughness, and corrosion-resistance. Republic supplies a complete range of analyses in hot rolled and cold finished form. Check and mail coupon for full facts.

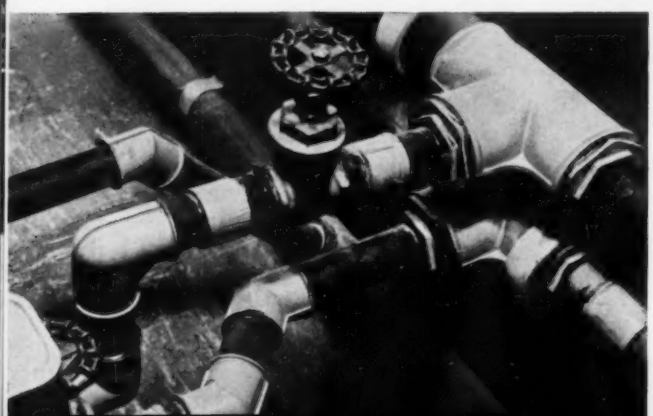
Easy, rapid, thorough, and economical cleaning are standout features of bleaching and dyeing equipment fabricated from Republic ENDURO® Stainless Steel.

A water rinse quickly restores stainless steel's smooth, hard surface to sparkling cleanliness. This easy-clean quality is a definite benefit to dye houses, making possible quick color changes so that small runs can be processed economically with no danger of off color caused by dye carry-over. There is no need for expensive boil-outs. No need for using caustic, reducing, or oxidizing agents to remove dyes.

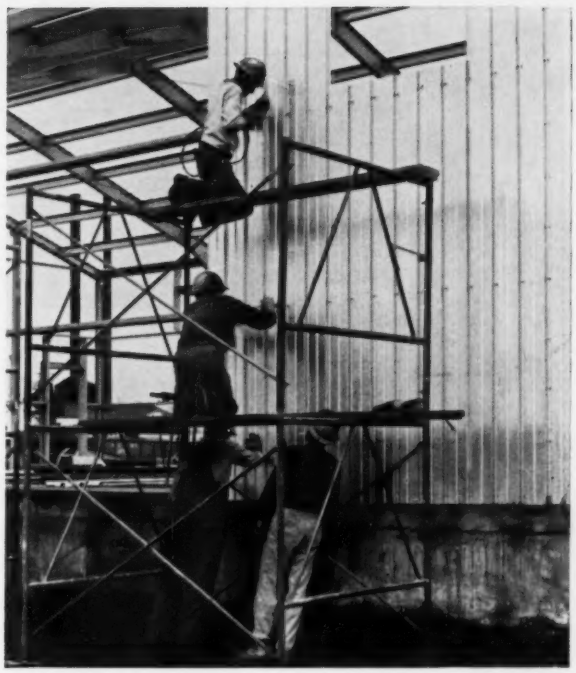
Republic Stainless Steel lasts and lasts. It is solid stainless steel with no applied surface or coating to crack, chip, flake, or peel. It stubbornly resists rust and corrosion. It's the metal that assures true dyed colors and pure bleached whites.

For immediate savings in cleaning and maintenance costs, for long-range savings in extended equipment life, contact your supplier about textile equipment fabricated from Republic Stainless Steel.

This example of the advantages of stainless steel is brought to you by Republic Steel in behalf of the stainless steel equipment manufacturers and the stainless steel service centers.



REPUBLIC SRK PLASTIC PIPE means major savings in chemical piping installations. Replacement costs caused by corrosion are eliminated. SRK is lightweight, easy to carry. It is readily cut with handsaw or hacksaw. Easily joined with brush-applied solvent and socket-type fittings. SRK is available in a range of working pressures, and in sizes ½" through 6". Send coupon for literature.



TRUSCON "BUDGET BUILDINGS" mean top utility at lowest cost. Ideal for fast enlargement of manufacturing or warehousing facilities. Three-week delivery from off-the-shelf stocks. Roofing and siding are formed from Republic tight-coated, continuous hot dip galvanized steel sheets . . . will not flake, crack, or peel. No painting needed. Truscon "Budget Buildings" are available in widths of 12 to 28 feet, in 10- and 12-foot heights . . . and in widths 32 to 48 feet, in 12- and 14-foot heights, in any lengths necessary. All roofing, siding, windows, doors, and hardware are shipped to the job site as a package. Mail coupon for full color brochure.

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World's Widest Range of Standard Steels and Steel Products

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1441 REPUBLIC BUILDING • CLEVELAND 1, OHIO

Send more information on:

☐ ENDURO Stainless Steel
☐ SRK Plastic Pipe
☐ Free-Machining ENDURO Bars
☐ Truscon "Budget Buildings"

Name _____ Title _____

Company _____

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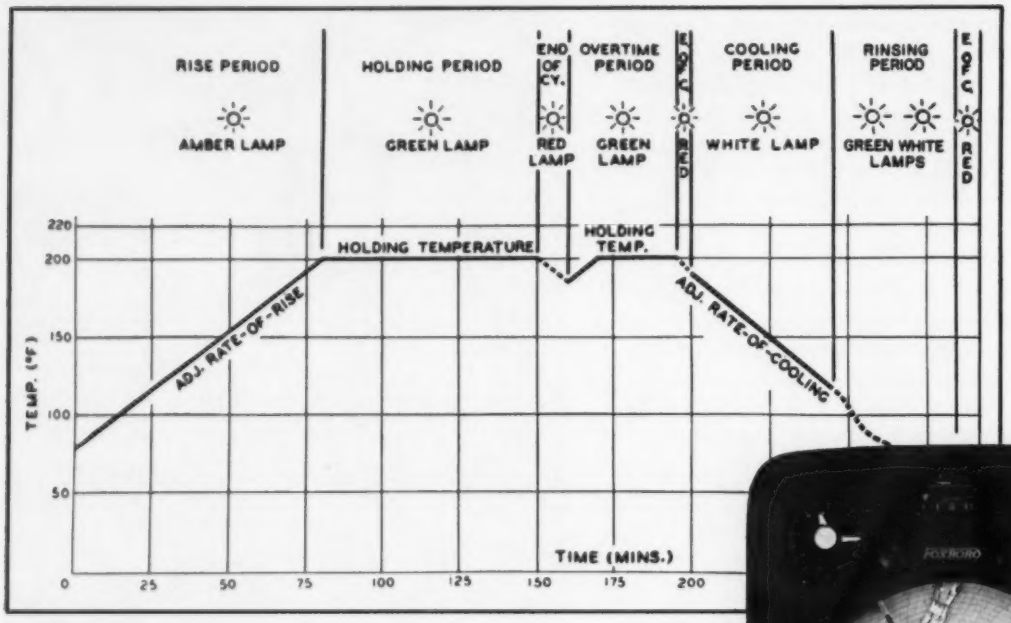
City _____ Zone ____ State _____

now!
RINSE AUTOMATICALLY, TOO...



new CycleLog* feature adds automatic rinse to Dye Bath control

In addition to controlled rate-of-rise; controlled holding; controlled cooling—Foxboro CycleLog Controllers now have a new operating exclusive—automatic rinse control for the dye bath kettle.

Here's how it works. The operator sets the CycleLog timer, for the desired rinsing time, when he starts the cooling cycle. The CycleLog does the rest: at the end of controlled cooling, rinsing starts *automatically*—a rinse signal is given, the rinse valve opens to flush away spent dyestuffs and chemicals. Valve closes and end-of-cycle light signals when timer runs out.

It's simple—it's automatic. And you can specify it on any new Foxboro CycleLog Controller, or have your existing CycleLogs modified to include it. For full details on automatic rinse control, and a variety of other CycleLog dye bath control functions, write **The Foxboro Company, 487 Neponset Ave., Foxboro, Mass.**

*Reg. U.S. Pat. Off.

CycleLog instruments for Dye Bath Control

Model 40 C-H
controlled heating-holding
Model 40 C-HC
controlled heating-holding-cooling
Model 40 C-HR
controlled heating-holding-rinsing
Model 40 C-HCR
controlled heating-holding-cooling-rinsing

FOXBORO REG. U.S. PAT. OFF. **CYCLELOG CONTROLLERS**

Colors are truer, re-runs fewer with Morton Chemical grade '999' salt

Tests for color standards show that dyes often are less effective when you use salt of average purity. Quality control methods will show best results with high purity Morton Chemical Grade '999' Salt. It's the all sodium salt, sodium chloride and a trace of sodium sulphate, that many dye manufacturers use in testing their dyes before they are sent to you.

When you use Morton Chemical Grade '999' Salt in your operation, it complements your dyes . . . makes them more effective and helps you get softer finishes, more even shades and greater color intensity. It's easy to see why. Morton Chemical Grade '999' is more than 99.95% pure sodium chloride. It is a low cost, high purity evaporated salt free from objectionable calcium and magnesium compounds that may precipitate or react with dyes to reduce their effectiveness.

Available in 100-lb. bags or bulk, Chemical Grade '999' is recommended for use *whenever commercial calcium-free salt* is required. It's specifically recommended when direct salting is used in dyeing rawstock, package, beam, beck or jig with either sulphur, direct, or naphthol dye.

Morton offers you intermediate grades of salt, too

In addition to Chemical Grade '999' Morton produces several other grades of high-purity salt for textile use. As the only nationwide salt company, Morton can supply the kind of salt and service you require, regardless of your size, particular operation or your location.

- ☐ Please send me more information about Morton Chemical Grade '999' Salt.
- ☐ I would also like to consult with a Morton representative about the other intermediate grades of salt Morton offers the Textile Industry.

Name_____
(please print)

Title_____

Company_____

Street_____

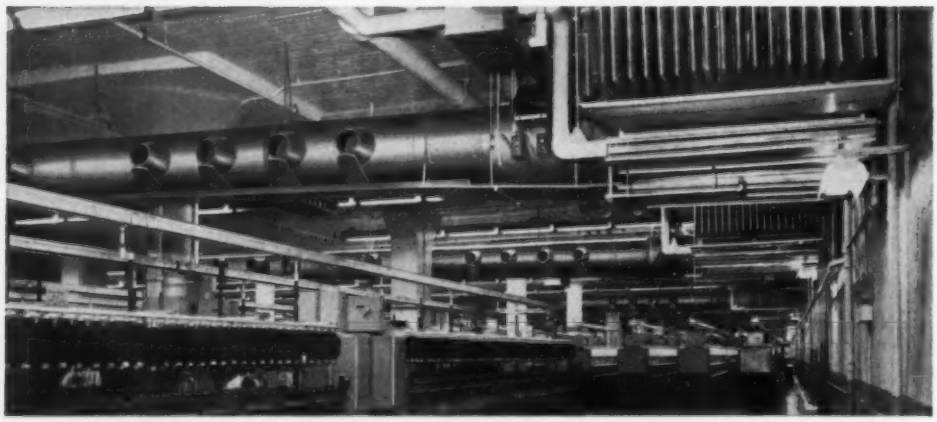
City_____ **Zone**_____ **State**_____

MORTON SALT COMPANY
INDUSTRIAL DIVISION

Dept. TI-7, 110 N. Wacker Drive, Chicago 6, Illinois

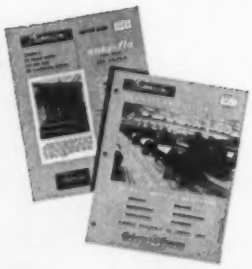
DAN RIVER'S
1st CHOICE 5 TIMES

Says BASIL D. BROWDER
Executive Vice-President
Dan River Mills, Danville, Va.



BAHNSON HUMIDUCTS

WITH REFRIGERATION AND EASY-FLO FILTERS PROVIDE FLEXIBLE UNIT-SYSTEM AIR CONDITIONING AT LOW COST



Free Illustrated Bulletins
For full details write for Humiduct Bulletin 4A, Easy-Flo Bulletin 27A.

"Five times in our decade of modernization," says Mr. Basil D. Browder, "we chose Bahnson Humiducts for Spinning and Weave Rooms at Dan River. Humiduct's versatile unit design gives us control flexibility for production requirements . . . Easy-Flo Filters provide clean air, reduce cleaning time . . . overtime maintenance is eliminated with Humiducts. We found that Humiduct's low first cost and efficient operation gave us the most modern and economical air conditioning for our needs."

Bahnson AIR-O-MATION
AIR AT WORK FOR INCREASED PROFITS

THE BAHNSON COMPANY
WINSTON-SALEM, N.C., U.S.A.

Look what happened to the corn we took off the cob

High fashion is *part* of what happened. For we serve the colorful world of textiles with products from corn. Products of highest quality—*Anheuser-Busch* quality.

AB

STARCHES • DEXTRINES • GUMS
For warp sizing, finishing, printing and dyeing.

ANHEUSER-BUSCH, INC., Bulk Corn Products Division, St. Louis, Missouri

NOW EVERY MILL CAN

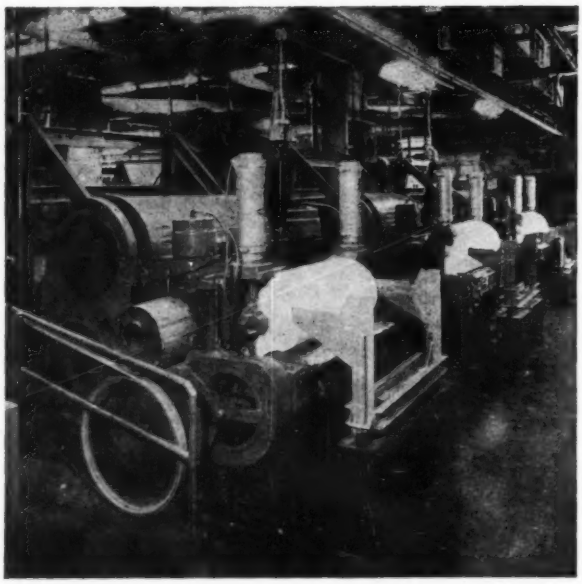
PRODUCE BIGGER AND Better LAPS WITH EXISTING PICKERS

It is not necessary to install brand new machinery to produce top quality laps!

The LONG PNEUMATIC LAP CONTROL SYSTEM

is the *only* automatic control device that can deliver uniform pressure on laps forming on the calender stack rolls . . . from start-up to doffing! This control may be applied to ALL EXISTING PICKERS . . . on calender roll, fluted roll or both! It is fully protected by U. S. Patent No. 2,871,519, other patents applied for. The constant air pressure eliminates radical fluctuations which are common with deadweight systems, and ensures top quality laps with virtually no waste on ends. LONG system eliminates up to 32 moving parts which, in turn, reduces maintenance to an absolute minimum.

More than 85 mills are now depending on these systems to produce bigger laps on either cotton or synthetic . . . laps of consistently high quality. Many have found that these installations point out hitherto undiscovered malfunctions in other parts of pickers. All have proven greater profits.



(Above) Photo of battery of pickers in Southern mill equipped with *LONG* Pneumatic Lap Control Systems. Note controls are installed on both fluted rolls and calender rolls.

Send TODAY for complete details and illustrated brochure to:

LIVINGSTON & HAVEN, Inc.

P. O. Box 808T, Charleston, South Carolina

Representatives in all major textile areas.

Address foreign inquiries to PLATT BROS. (SALES) LTD. Oldham, England

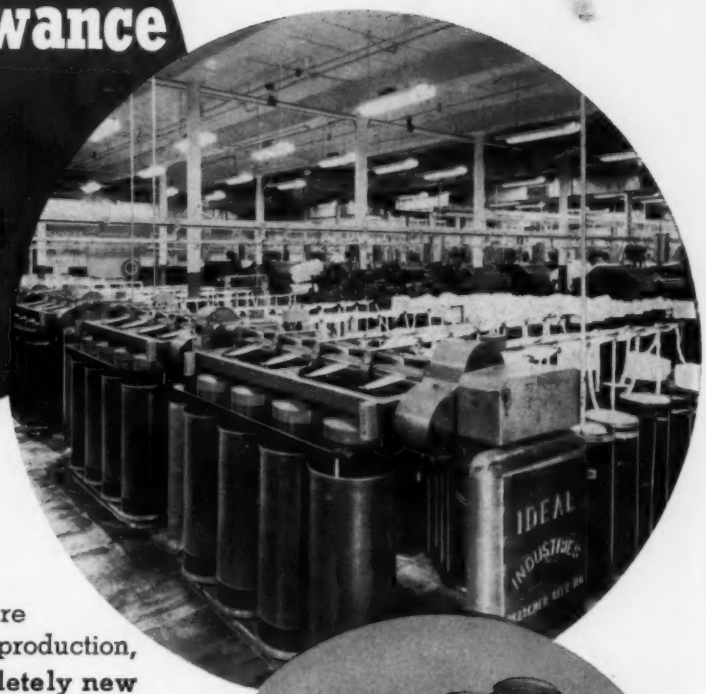
L&H also is exclusive sales representative for:

LONG Pneumatic Sliver Lap Control Systems*
L&H Pneumatic Picker Clutch*
L&H Pneumatic Lap Pin Pusher*
L&H Pneumatic Pressure Roll Controls*

*U. S. and Foreign Pats. Applied for.

Ideal's Trade-In Allowance

Applies to Completely New Frames or Rebuilt Drawing Frames



Take your choice. Either way you save substantially. Either way you get drawing frames with the famous Feathertouch action which are equal in appearance, performance, production, efficiency, and quality **to any completely new drawing on the market.**

Rebuilt frames can be furnished in either 16" or 18" gauge four delivery frames. Every working part above the can table is new. These are factory rebuilt . . . not mill changeovers. The complete frames are delivered to your mill ready to set in place and run.

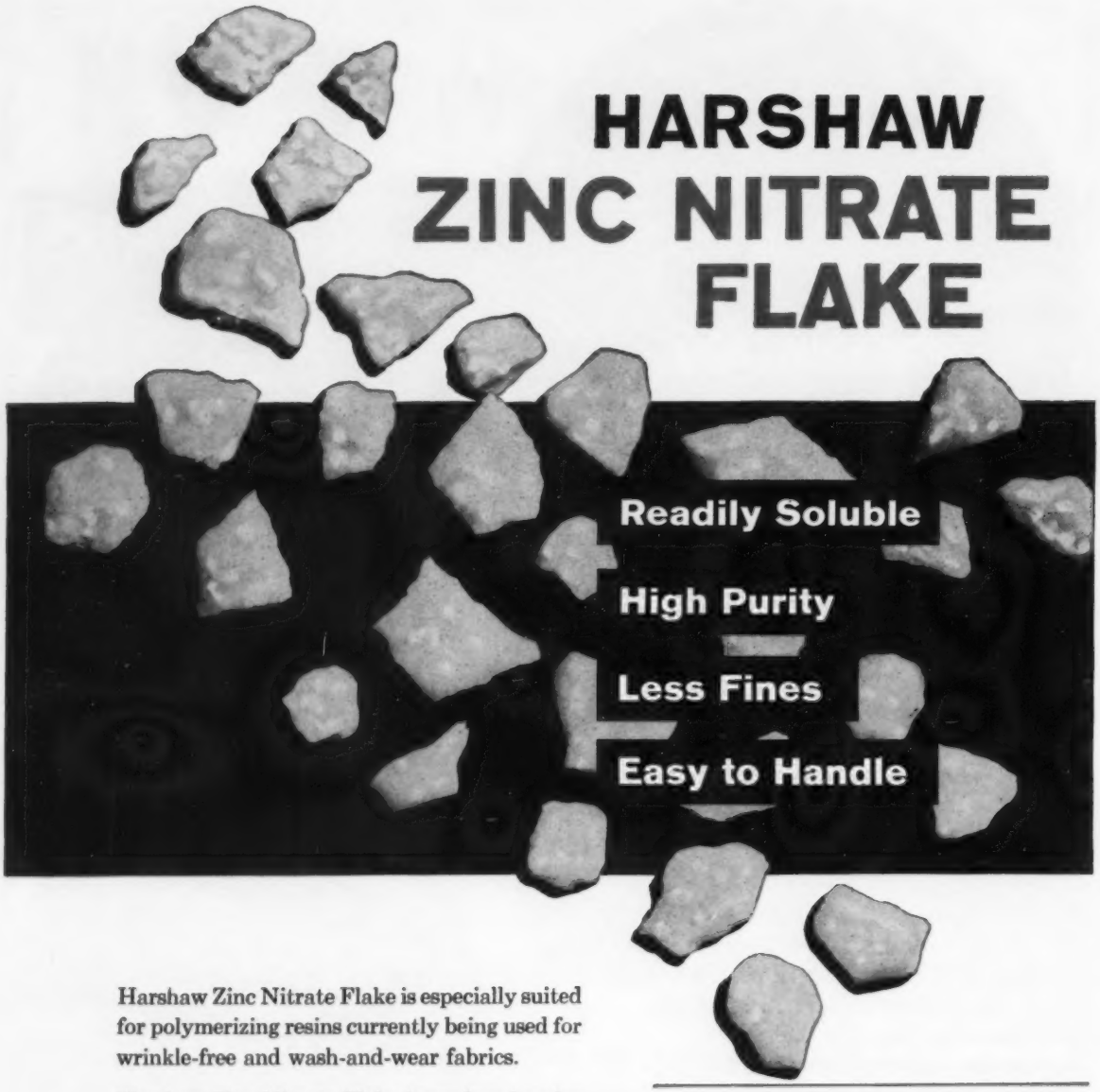
These are the only parts of the original frames which are used in the rebuilt frames and they are completely reconditioned and refinished. You get the complete IDEAL Frames as shown in large circle, ready to run upon arrival at your mill.

Standard or Optional Features

Individual Vacuumatic Cleaning
Individual Motors
Individual Drives
Electro-Magnetic Clutch
Electric Knock-Off Actions
Ball Bearing Spacing Sections
No Shafting, Flat Pulleys, or Belts
The Famous Feathertouch Action
—produces highest quality sliver—at over 400 ft. per min.
Frames can be operated singly or in multiples

Ideal Industries, Inc.
Bessemer City, N. C.

HARSHAW ZINC NITRATE FLAKE



Harshaw Zinc Nitrate Flake is especially suited for polymerizing resins currently being used for wrinkle-free and wash-and-wear fabrics.

Harshaw Zinc Nitrate Flake is produced under rigid control assuring the user of uniform resin catalysis at all times.

Harshaw Zinc Nitrate Flake measures about 3/32" thick by ½" long, thereby reducing dust and fines to absolute minumum.

Packed in 300 or 100 pound Leverpak drums with polyethylene liner, Harshaw Zinc Nitrate Flake is available for immediate shipment. Write for samples and prices.

TYPICAL AVERAGE ANALYSIS:	
Assay as $Zn(NO_3)_2$	72.5%
Zn	24.6%
Fe	0.001%
Pb	0.003%
pH of 5% solution	5.2
Insol. in 1% Nitric Acid Solution	0.001%

THE HARSHAW CHEMICAL CO.
1945 E. 97th Street, Cleveland 6, Ohio

CHICAGO • CINCINNATI • CLEVELAND • DETROIT • HASTINGS-ON-HUDSON, N.Y. • HOUSTON • LOS ANGELES • PHILADELPHIA • PITTSBURGH

Picker Overhauling Is Simple When You Depend On . . .

Aldrich Repair Service

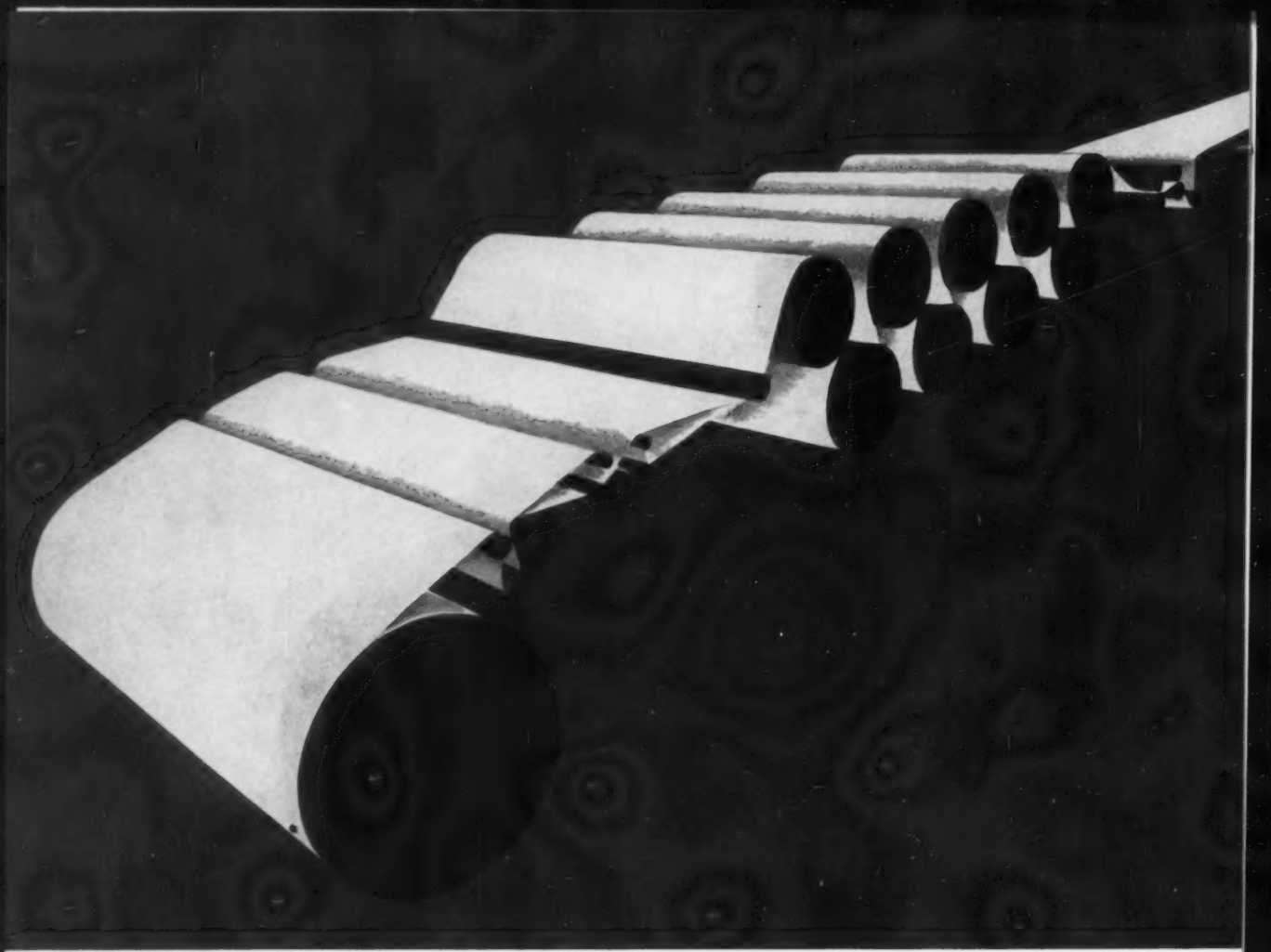
We furnish skilled men for reworking pickers, and can deliver to these men any needed parts within 24 hours in most southern states, and within 48 hours to almost any cotton mill in the United States. This makes thorough overhauling a simple matter. Anything needed for a good job can be had at once, while the machine is down for repairs.

If you do your own overhauling, this speedy delivery service is just as valuable. You don't have to wait for repair parts — they are there when you want them.

We manufacture and install complete blending, opening, and picking systems for cotton and synthetics, and cleaning systems for cotton.

Aldrich Machine Works

Greenwood, South Carolina



The yarn path for BETTER loom beams runs through the Kidde-Johnson Slasher

Of course, you want tightly and evenly-packed loom beams. You want size evenly applied, with careful control of pick-up, and fast drying at regulated temperatures. You want controlled moisture content in the yarn after drying. You want equipment that's easy to maintain. The Kidde-Johnson Slasher meets your requirements perfectly. Here's why:

1. **Controlled tension**
2. **Rigidly supported loom beam**
3. **Fingertip calibration of stretch**
4. **Precise control of size level and temperature**
5. **Uniform application and penetration of size**
6. **Geared cylinder drive**
7. **High pressure, Teflon-coated cylinders**
8. **Stainless steel components**

Kidde makes the Slasher to suit your production requirements

The Kidde-Johnson Slasher will slash yarns of any fiber — filaments or spuns — from the finest count for delicate fabrics to the heaviest denier tire cord.

It is constructed to fit your requirements — for cotton system slashing, silk system slashing, or both.

Its production capacity can be expanded to meet future needs. Drying cylinders, single or combination quetsches can be added, head ends extended or widened.

For full information about complete new slasher installations as modernization of your present equipment, call PILGRIM 8-8100 or write . . .

TRICOT AND RASCHEL MACHINES • TRICOT WARPERS • HORIZONTAL WARPERS • BEAMERS
CREELS • SLASHERS • WINDER-REDRAWS • TENSOMETERS • TENSION COMPENSATORS

Kidde

TEXTILE MACHINERY CORPORATION — BLOOMFIELD, NEW JERSEY

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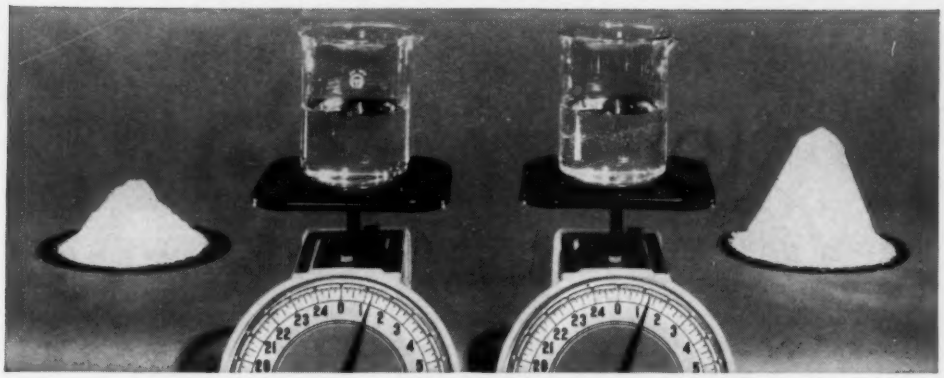
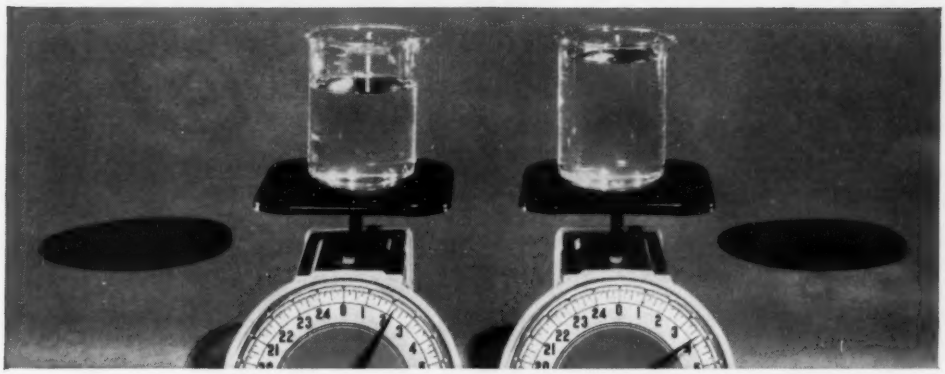


Before

Weight and temperature of water (68°F.) in each beaker is identical. But the two stacks of chemicals are different — *3 times more* potassium carbonate (right) than sodium carbonate (left).



After

adding each chemical to a beaker, both are completely dissolved. You can *see* the greater solubility of potassium carbonate in the higher fluid level and heavier weight of the righthand beaker. It has *3 times more* carbonate in solution than the other beaker containing sodium carbonate.

Get more carbonate in solution... more soluble reaction products with SOLVAY POTASSIUM CARBONATE

By switching from sodium carbonate (soda ash) to more soluble Solvay® Potassium Carbonate, you can save on handling, storage and packaging with more efficient, more concentrated solutions. You also get more highly soluble reaction products—for superior performance in many applications.

These features are important to consumers and manufacturers of liquid soaps and detergents; producers of special boiler and other cleaning compounds; chemical and textile processors.

You can obtain Solvay Potassium Carbonate in 3 handy forms—99-100% calcined, 83-85% hydrated and 47% liquid. Mail coupon for free sample and further information.

Sodium Nitrite • Calcium Chloride • Chlorine • Caustic Soda • Caustic Potash Potassium Carbonate • Sodium Bicarbonate • Chloroform • Methyl Chloride Soda Ash • Vinyl Chloride • Ammonium Chloride • Methylene Chloride • Carbon Tetrachloride • Snowflake® Crystals • Monochlorobenzene • Ortho-dichlorobenzene Para-dichlorobenzene • Ammonium Bicarbonate • Hydrogen Peroxide • Aluminum Chloride • Cleaning Compounds • Mutual® Chromium Chemicals

Allied Chemical

SOLVAY PROCESS DIVISION
61 Broadway, New York 6, N. Y.

SOLVAY branch offices and dealers are located in major centers from coast to coast.

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ALLIED CHEMICAL CORPORATION
61 Broadway, New York 6, N. Y.

Please send me:
- ☐ Working sample of Solvay Potassium Carbonate
- ☐ Solvay Potassium Carbonate Fact Book

Name _____
Position _____
Company _____
Phone _____
Address _____
City _____ Zone ____ State _____

TC-Hydro is a dry, white, free flowing, crystalline powder of uniform size and structure. It is dust free, assuring highest stability and uniformity.

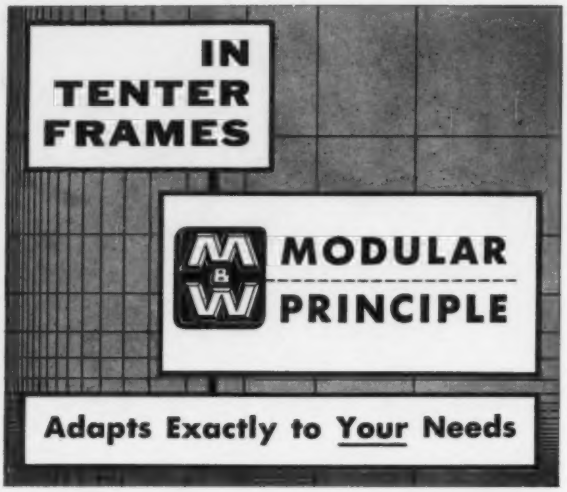
As Miners Of Sulfur Bearing Ores— We have utilized our basic position in Sulfur Chemistry to produce another product of highest purity and quality for use in the Textile Industry.

When You Need It— Our production is located in the heart of the Southern Textile Industry which permits us to render over-night delivery service to most Southern points—also small lot shipments are available from centrally located warehouses.

Phone, Wire or Write for literature and test samples if desired.

TC
TENNESSEE CORPORATION

TENNESSEE CORPORATION
617-29 Grant Building, Atlanta, Georgia



YOUR REQUIREMENTS are all we need to engineer our modular tenter frame components to meet *all* your processing with scientific exactness. You realize new efficiency and economy because you do not have to compromise—you get just what your processing requires.

HERE'S WHY:

1. M&W drive units are built in 5, 15, 50, 75, 100 hp. With these increments, intermediate horsepower requirements are easily accommodated—drive units are torqued to do the job. Hence, you don't "buy a 5-ton truck to carry a half-ton load", nor vice versa.

2. M&W tenter frames are built with all other components in proper proportion and in lengths from 2½ ft. to 200 ft., any desired width. In addition, we can readily design for all exceptional types of uses and special needs.

3. M&W tenter clips — many of them originated by us — are made in at least 15 different styles, further varied by types of metals used, pins, etc.

THE PRICE IS RIGHT You design your own tenter frame just by telling us your requirements. From there on you get M&W versatility, flexibility, engineering know-how—unmatched in the industry. Because we don't have to compromise by filling orders with a single machine model, you get proper design, properly powered—at a really reasonable cost. Write today!

93-9

MARSHALL and WILLIAMS CORPORATION
PROVIDENCE, R. I. GREENVILLE, S. C.
Canadian Representative:
RUDEL MACHINERY COMPANY LIMITED
Main Office: MONTREAL, QUEBEC.

For mills with a future!...the frame of the future

the New WHITIN

PIEDMONT

SPINNING FRAME

IN the new PIEDMONT, Whitin offers you a Spinning Frame which is not only smart in appearance, not only advanced in design — but which is also foremost in economy of operation. There are PIEDMONT benefits in every phase of your spinning operation.

PRODUCTION: Increases in front roll speed of 25 to 30% more than *average* production — and up to 15% more than *top current* levels.

PERFORMANCE: Simple construction with "built-in" efficiencies — straight line spinning plus SUPER-DRAFT for quality yarn — large "control-wound" packages for reduced spooling costs.

MAINTENANCE: Lowest cleaning costs possible thru streamlining — open construction — ball bearing assemblies — unique single-spindle drive — elimination of cylinders and tapes.

In every respect, the Frame of the future for mills with a future!

Features 27" width, traverses up to 12", enclosed single spindle drive, simplified head end and gearing, new builder, integral waste removal and motor cooling unit.

WHITIN
MACHINE WORKS
WHITINSVILLE • MASSACHUSETTS

CHARLOTTE, N. C. • GREENSBORO, N. C. • ATLANTA, GA. • SPARTANBURG, S. C. • DEXTER, ME.

"What's this big secret about *Houghton Softex?*"

YOUNG LADY: It's really no secret. Softex is used by many processors of Ban-Lon® and Orlon® knit goods.

FRIEND: *What does Softex do?*

YOUNG LADY: It gives those products an extra special finish and texture. It adds a wonderfully soft feel to the goods.

FRIEND: *That's important?*

YOUNG LADY: Very. When we girls shop for a knitted garment we choose mainly by color, material and the "feel." And Ban-Lon and Orlon knitted goods treated with low-cost Softex are as soft as . . .

FRIEND: *Lamb's Wool?*

YOUNG LADY: Of course!

FRIEND: *B a a a!*

TEXTILE FINISHES

. . . products of

E. F. HOUGHTON & CO.

Ready to give you on-the-job service

Philadelphia, Pa. • Chicago, Ill.
Carrollton, Ga. • Detroit, Mich.
San Francisco, Calif. • Toronto, Canada

HOUGHTO-SIZE • CERFAK DETERGENTS • SURFAX WETTING AGENTS • SOFTEX SOFTENERS • SULFOL FIBER LUBES

Stainless Steel gives foolproof protection against color flaws

at Franklin Process Company,
a Division of Indianhead Mills, Inc.,
Philadelphia

The Franklin Division plant of Indianhead Mills Inc. has been dubbed "The House of Rainbow Colors" . . . a tribute to the variety and rich tones of the yarns dyed there. Mr. Walter Wolfe, Vice-President and Manager of Franklin Division, points out that only Stainless Steel is used in their vats and dyeing machines.

"Stainless Steel gives us foolproof protection against color flaws," says Mr. Wolfe. "Stainless can withstand the extremely high temperatures used to dye the yarns. Our equipment can be quickly and *thoroughly* cleaned because the Stainless Steel doesn't pit or corrode—there's no place for dirt or residue to stick. This is important when we change colors —a new batch of yarn isn't dulled by dye carry-over from an earlier batch.

"Stainless Steel has contributed vastly to the high quality of our yarn, in brightness of color and cleanliness. What could be a better recommendation than that?"

Specify Stainless Steel for *your* equipment. And if you want service-tested quality, specify USS Stainless Steel—available through the U. S. Steel representative or your local Steel Service Center. *USS is a registered trademark*

United States Steel Corporation—Pittsburgh
American Steel & Wire—Cleveland
National Tube—Pittsburgh
Columbia-Geneva Steel—San Francisco
Tennessee Coal & Iron—Fairfield, Alabama
United States Steel Supply—Steel Service Centers
United States Steel Export Company

USS United States Steel

THE QUICK BELT THAT MINIMIZES DOWN-TIME

Here are four little words that cost you money:
"down for belt replacement" or "down for broken tapes".

If you figure the machine hours saved with Texalon, the new quick belt by Rhoads, you'll never be without it. Texalon is an all-synthetic belting, easily made endless on the job with smooth, strong laps.

Texalon springs without permanent stretch.
Runs smoothly and evenly without slipping.
Resists deterioration under wet or corrosive conditions.

Keeps rolls of Texalon on hand in all desired widths — 1″ to 24″ — to reduce belt changing time to a minimum.
Bulletin on request to J. E. Rhoads & Sons, Wilmington 99, Delaware.

Typical Texalon Applications

TAPES . . No stocking problem for spindle tapes, carrier tapes, or conveyor tapes. New tapes made endless in minutes from roll of Texalon. Laps are scarcely discernible. No bump, no permanent stretch.

CONVEYORS . . Texalon can be made endless without dismantling the conveyor. No slow, tedious vulcanizing. Gives long service life without losing desired tension.

POWER TRANSMISSION . . Replaces woven endless belting, rubber or leather. Ready to be made endless right on the job. Typical applications include grinders, routers, saws, planers, knitting machines, paper mill drives.

RHOADS

Where the Job Selects the Belt . . . Since 1702

SHORTS & REMNANTS

(from page 26)

that is basically unexciting—*Printer's Ink.*

Another Boo-Boo

Ed Ely, the supersalesman for Foster Machine Co., has tactfully informed us of some confusion in one of our ads. It seems that a recent Fisher Mfg. Co. message in TI pictured the Fisher boxes at a Foster winder, but the headline called the winder a Roto-Coner.

Our apologies, **Ed;** as the teenagers say, we goofed. Truth of the matter is that Fisher boxes will work on *both* machines.

The First Hundred Years

These two old timers represent a total of 120 years of service to Whitin Machine Works. **E. Kent Swift,** left, chairman of the board,

has been with Whitin for 59 years; and **William J. McNeill,** outside erector, has a 61-year service record. **Mr. McNeill,** Whitin's oldest employee in point of service, is still sent out on trouble shooting jobs.

More Merchandising Know-How

Mrs. S & R found this little tag in a pair of Blue Bell Bermuda shorts purchased recently:

EVERY PRECAUTION
Has been taken to make this garment the best value you can obtain for your money. Everything that goes into this garment has been tested to insure your complete satisfaction. Every garment has been carefully inspected. We sincerely hope that it meets with your approval. I personally checked this garment.—
Ruby Lashley

We think it's a nice touch. And even more so, on the reverse side of the tag it says, in fine big capital letters, "MADE IN THE U. S. A. BY AMERICAN LABOR."

(Continued on page 182)

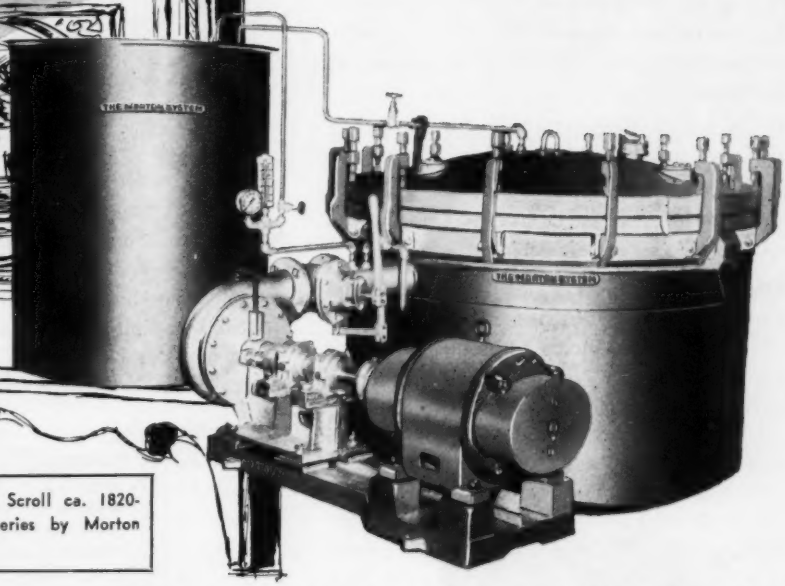
Seth Thomas, Pillar & Scroll ca. 1820-1830. Famous clock series by Morton Machine.

It's time to Cut Cost

FOR THE MOST EFFICIENT DYEING & BLEACHING EQUIPMENT, INSIST ON

MORTON SYSTEM

THE FINEST MONEY CAN BUY



Morton System Stock Dyeing & Bleaching Machine

If you're thinking about new dyeing, bleaching and drying equipment, you should be thinking about the Morton System . . . it is absolutely the finest money can buy. Built to comply with ASME code specifications.

MORTON MACHINE WORKS, Inc.

COLUMBUS, GEORGIA, U. S. A.

Manufacturers of THE MORTON SYSTEM Machinery for Dyeing and Bleaching of:

BEAMS • PACKAGES • STOCK PIECE TOPS • VALVES • PUMPS • BEAM AND PACKAGE EXTRACTORS AND DRYERS • DYE BEAMS, ALL MAKES AND DESIGNS DYE TUBES • DYE SPINDLES • TUBE SPACERS • CUSTOM BUILT TANKS TO CUSTOMER'S SPECIFICATIONS

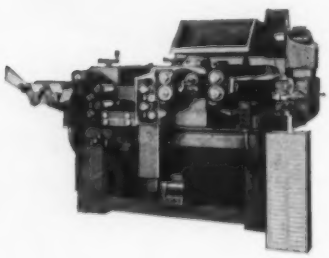
"I never knew you people made all these machines"

He was standing in a production bay at the Turbo plant. He's a division superintendent for one of the large textile manufacturers.

He had seen the Turbo engineering department, the research and development division, production, assembly, and demonstration machines in operation.

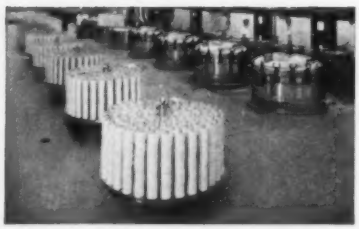
"I am simply amazed at the diversity of the Turbo operation — in textile machines, foundry machines, metalworking, electronics, and general industry," he said. "I never knew you people made all these machines."

You, too, should know the family of Turbo machines, carefully engineered, proved under mill conditions for increased production, better quality, lower costs . . . and backed by a strong service-minded organization.

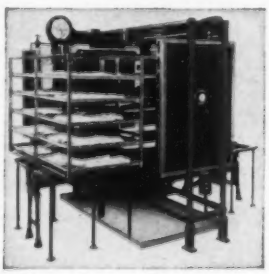


The Turbo Stapler is used by more than 50 leading spinners to convert synthetic tow to the finest staple. Drastically cuts doubling, drafting, and roving operations. Denier, staple length and crimp are under the operator's complete control. Turbo Orlon*, featured by almost every manufacturer of knitted outerwear, starts as tow on a Turbo Stapler.

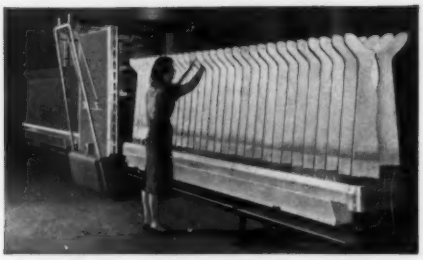
*DuPont T.M. for its acrylic fiber



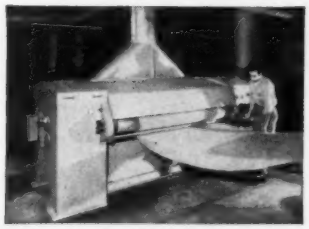
Smith-Drum Package Dyeing Machines, a member of the Turbo family of high-production machines, are first choice for high-temperature, high-pressure dyeing. A sample-package kier permits sampling without interrupting main lot dyeing. A high-pressure, dye-feed kier allows dye bath additions without pressure or temperature changes in the main body of the dye liquor.



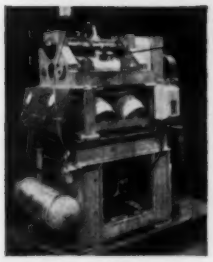
Modified filament sweaters are "set for life" in the Turbo Sweater Setter, a tray-type machine with a production rate of 400 dozen sweaters per 8-hour day. Electrical timers regulate the vacuum and steam cycles to insure uniform setting. Nothing for the operator to do except load the carriers. Turbo heat-setting machines are used throughout the textile industry for the precision setting of fibers, yarns, fabrics, and finished garments.



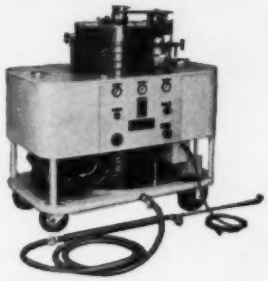
The Turbo Dye Boarder is a complete hosiery dyeing and finishing operation with a production of 140 dozen pairs in 8 hours with one operator. High penetrating action gives desired elasticity so that mills can make substantial savings by using raw pirn instead of pre-shrunk yarn. Other Turbo Machines for hosiery processing include preboarders, finish boarders, a combination of both, boardless dryers, and the Turbo-Brewin Machine for combination preboarding, dyeing, and finishing.



The Turbo Electro-Finisher changes the appearance and character of woolens, wool blends, and high pile fabrics. An electrically heated cylinder separates and straightens the fibers, then polishes them to a vibrant luster. Cylinder temperature is accurately controlled so that every inch of fabric width, every foot of fabric length is finished precisely alike. Production speeds — 3 to 30 yards per minute.



Turbo Crimpers are used by major fiber producers to make the crimping of synthetic fibers a uniform, high-production operation. Crimp can be varied by adjusting a single knob.



The Turbo Steam Cleaner is the plant engineer's best friend. It's a heavy duty unit designed for continuous, uninterrupted production. Congealed grease, size, lint, and dirt are loosened and washed away. Choice of oil-fired and electric models. Completely safe. Pays for itself.

★ ★ ★

This is just an introduction to the Turbo family of engineered machines. Turbo serves many industries not even mentioned here, including foundries, metalworking, and electronics.

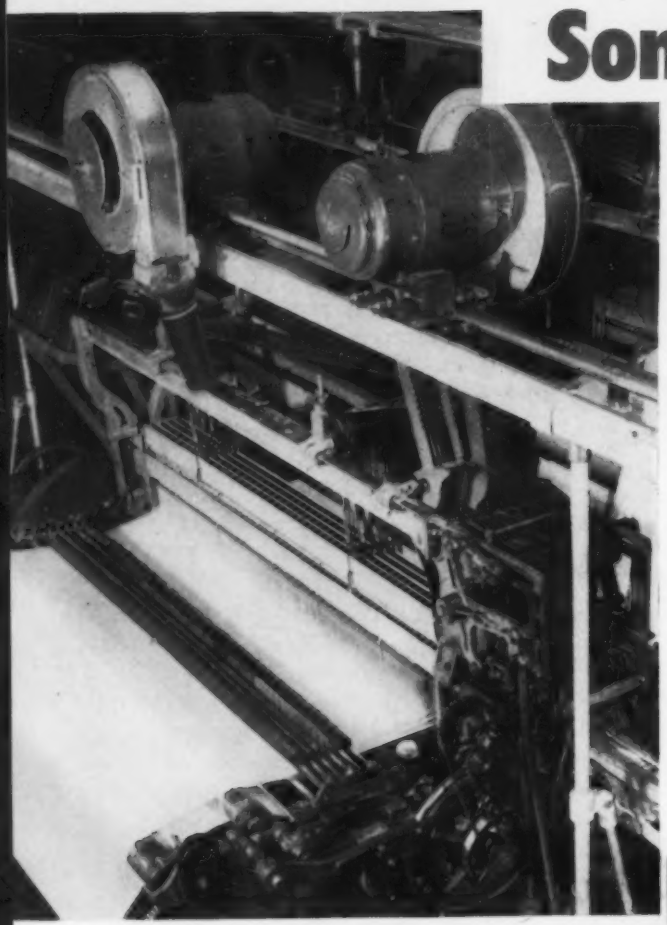
When you buy a Turbo Machine you get *results*. Operators are quickly and easily trained. Machines are automated wherever possible. Maintenance is reduced to a minimum. Talk to a Turbo engineer about your requirements.

TURBO

... a family of engineered machines

TURBO MACHINE COMPANY, LANSDALE, PA.

Some Case Studies



First Commercial Installation

A North Carolina mill on spun synthetics.
Completely equipped in four steps:

1951—Original tandem unit, with oscillating outlets, over XD's, in No. 1 Mill. Still operating as illustrated.
1952—Remaining looms in this room equipped.
1953—XD's and W-3's in No. 2 Mill equipped.
1955—New XD's equipped.

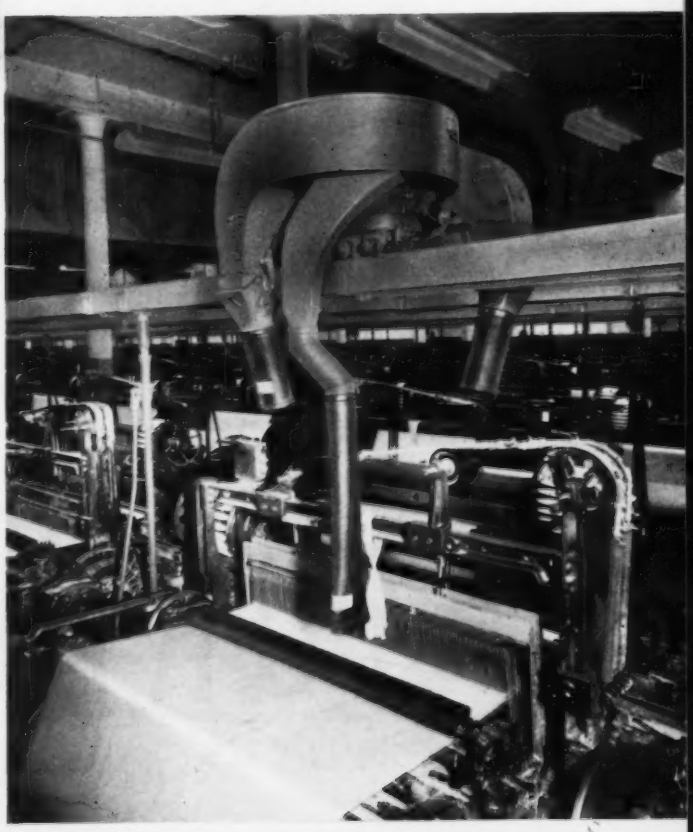
(70% r.h. Evaporative cooling until 1954, when refrigeration added.)

Another Early Installation

A South Carolina mill on combed broadcloth.
Completely equipped:

1953—Tandem unit over X-2's.
1956—System extended to remaining looms in room.
1958—Oscillaires over X-2's in another room.

(80% r.h. Central air washer humidification with booster atomizers.)



Equipment Design

Track:
Sturdy two rail—no swaying of unit.
Floor supported, for clear ceiling areas and ready accessibility. Supports easily removable for major loom maintenance.
Shock-absorbing mounting where needed.

Electric Conductors:
Solid brass. Safely shielded. Non-spark.

Oscillaire Blowing Unit:
Single-carriage, -motor, -fan. Low maintenance.
Oscillating and fixed air currents.
Air automatically deflected from certain areas.
High and low velocities separately adjustable.
Controlled air prevents lint boil-ups, loom troubles, seconds.
Travel is continuous-direction, or reversing.
Unit cleans itself and track.

Materials and Finishes:
Suited to dampness, stickiness and vibration.
Cleaner and track special-painted. Pastel and contrasting colors available.

# of Parks-Cramer Loom Cleaning

A Georgia Mill (below)

Completely equipped.

1956—Portion of X-2's in annex.
1957—Remaining X-2's in annex.
1958—X-2's in main weave room.

(82% r.h. Wet duct system. Drills, twills, and heavy cotton. Good cleaning under conditions that are not easy.)

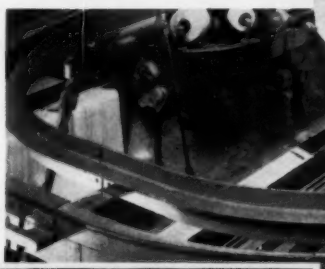
A Look at the Future

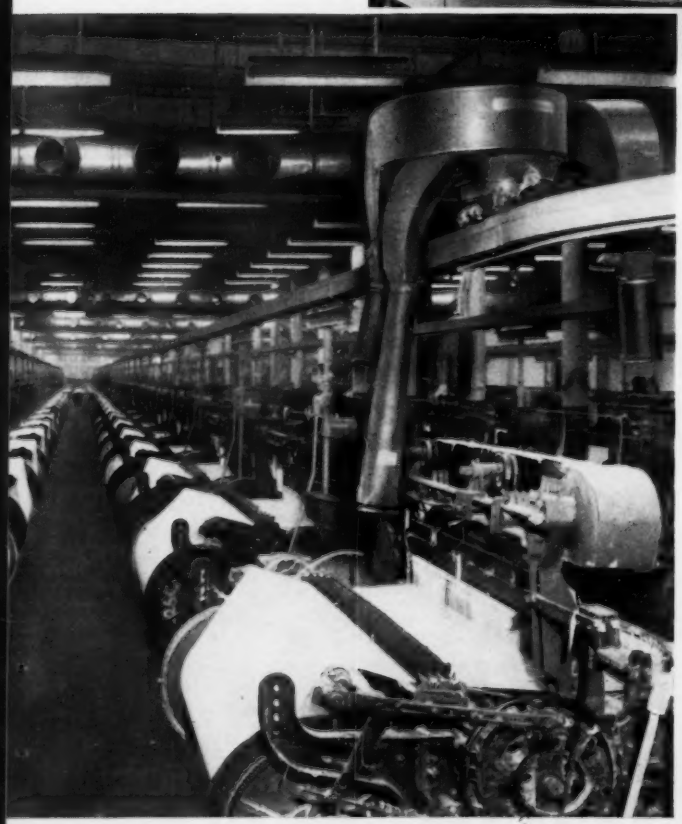
First commercial installation of shuttleless looms. Mill located in Georgia.

1958—Entire installation of DSL looms equipped.

Note traveling vacuum lint pickup and disposal unit in tandem with Oscillaire blowing unit.

(75% r.h. Dry duct air conditioning system with refrigeration and booster atomizers.)





Applications and Benefits

Oscillaire Loom Cleaning is applicable to a wide variety of looms, products and mill conditions, cotton or synthetics, fine or coarse fabrics.

Delivers air currents onto arch, harnesses, harness motions, drop wires, stop motions, transfer motions, lay, shuttle boxes, beam, yarns and fabric.

Prevents objectionable lint accumulations between warp-outs. Eliminates most hand cleaning by compressed air. Lessens loom stops. Increases production.

Greatly reduces woven-in lint, oil spots, set and start-up marks, skips, floats and pick-outs.

Parks-Cramer Company

FITCHBURG, MASS.

CHARLOTTE, N. C. ATLANTA, GA.

Traveling Cleaners since 1926

414

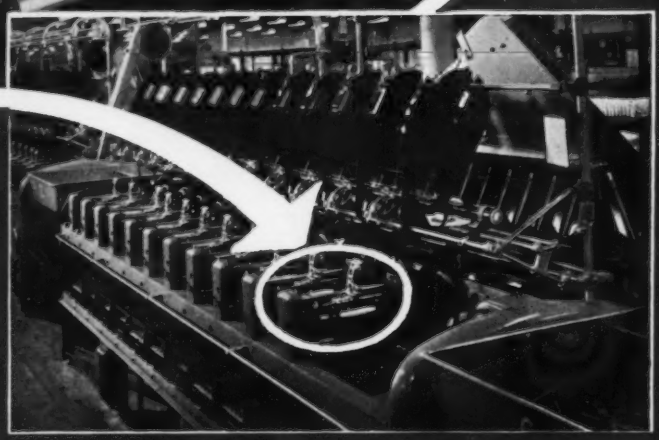
Rugged • Flexible • Trouble-Free

PRECISION

HIGH SPEED QUILLING

Schlafhorst

AUTOCOPSER



★ COMPENSATING TENSION—Bobbin Tension variation caused by package variation is held to a minimum.

★ TAIL ANCHOR—Tail at start up is cut off short and tucked under first few turns of faster bench.

★ ROLLER YARN GUIDE DRUM

1. Delicate handling of yarn.
2. Uniform tension from full diameter to nose.
3. No erratic strokes because no reciprocating parts to wear loose.

★ FEELER WHEEL BOBBIN BUILD

1. All bobbins same diameter regardless of yarn count variations.
2. Layer-locking eliminates ridges and makes non-slipping bobbins.

★ YARN END—Yarn end on a full bobbin is always cut off 2" long and remains at tip of bobbin—no back-winding of end.

★ NO PIECE QUILLS—Each spindle stops at break or run out end and can be tied up and restarted.

★ Precision pinboarded in sequence.

Imported by

AMERICAN SCHLAFHORST CO.

Sold and Serviced by

THE TERRELL MACHINE CO., INC.

CHARLOTTE, N. C.

NEWS IN BRIEF

Army to Sell Duck. After checking the requirements of other government departments, the Army plans to dispose of its $87 million stock of excess duck and webbing. Sales will be coordinated with the Department of Commerce

so as not to depress the market. The stock includes 79.6 million square yards of duck of various types, and about 200 items of webbing worth $20 million. Storage charges on the duck and webbing were said to be about $800,000 a year.

Wool Conference. The Textile Institute has announced that plans are well along for the second International Wool Textile Research Conference which the Institute is organizing with financial assistance from the International Wool Secretariat, Wool Textile Research Council, and other interested groups. The Conference will be held in Harrogate, England, in May, 1960, and will be followed immediately by the Institute's annual conference in London, marking the 50th anniversary of the Institute.

TTMA Insurance Plan. Tufted Textile Manufacturers Association has made a group life insurance program available to its manufacturer and associate members. The group policy will cover all management and administrative employees, and no physical examination is required.

Si-Ro-Set Demonstration. A complete unit to demonstrate the Si-Ro-Set permanent pleating and creasing process for wool garments has been set up in the laboratories of Evans Chemetics at 250 East 43rd St., New York. The lab will also service manufacturers in the New York area who wish to test-pleat wool fabrics.

Knits for Vinyl Backing. Knit jersey is becoming a staple fabric as a backing material in vinyl laminates and in the calender coating field, according to John Zulch of Wellington Sears Co.

Coliseum-Mart Under Way. Ground has been broken and construction started on a $15,000,000 Coliseum and Merchandise Mart at

the intersection of U.S. Highways 23 and 29, near Atlanta, Ga. The 350,000-square foot Coliseum will have a seating capacity of 38,350,

Cotton Is for Spinning — Not for Government Storage

■ When a government fixes a price, the consequences go far beyond what those in favor of price fixing expect. Cotton is a tragic example.

The government price support for cotton is based on grade and staple. The government "loan" on a bale of cotton has in usual effect been a purchase. The higher the grade, the higher the loan.

In an effort to get the highest possible loan price for the farmer, many ginners have followed procedures which have very seriously damaged the cotton they have ginned. The result has been that the farmer has gotten a higher loan on his cotton but at the same time has severly damaged his product.

In looking around for the culprit who has almost ruined a large part of the American cotton crop, it is easy to indict the farmer who seeks out the ginner who will produce the highest grade; or to indict the ginner who, by overheating and overginning, gets the high grade. It is not entirely fair, to put the blame here and it certainly doesn't do any good because both the farmer and the ginner are going to continue to do what is in their immediate economic interest — and that is to get the highest grade which will bring the highest government-support price.

Unless American cotton is to become completely unspinnable, it must be raised for consumption and not for a government warehouse. It must have its price fixed by its real value instead of an artificial government price based only on grade and staple.

The situation is getting worse rapidly. The long-run effect on the whole cotton industry will be disastrous unless a bale which has been overginned and overheated can be properly penalized in the market instead of being rewarded by a high government loan.—*J. Craig Smith, president, Avondale Mills, in the* **Avondale Sun.**

top management attention to more prime accounts

BEECHCRAFT SUPER 18

Write or phone for descriptive brochure

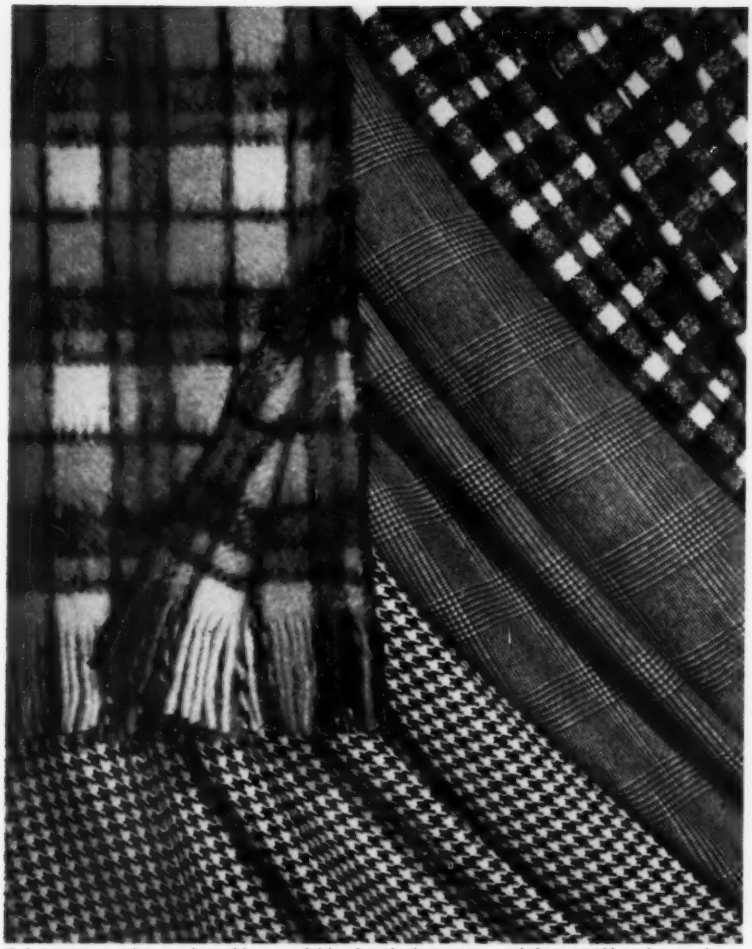
Southern Airways Company

ATLANTA, GEORGIA TEL. POplar 7-3766

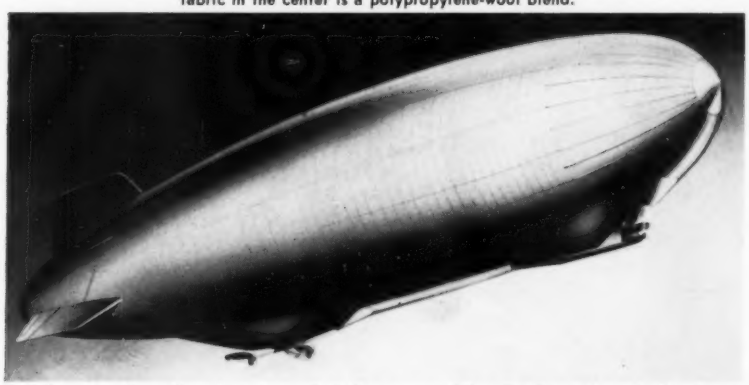
Charlotte, N. C., Tel. FRanklin 6-7150 *Birmingham, Ala., Tel. FAirfax 2-0502*

Orlando, Fla., Tel. CHerry 1-1585

BEECHCRAFT — AIRFLEET OF THE TEXTILE INDUSTRY



Fabrics from polypropylene fibers and blends: Blanket at upper left is 100% polypropylene; at lower left and upper right are suitings, also of pure polypropylene; the glen plaid fabric in the center is a polypropylene-wool blend.



Artist's conception of nuclear-powered airship proposed by Goodyear Aircraft Co. Available for construction of the airship is a new rubberized Dacron fabric capable of withstanding radiation exposures up to 100 million roentgens.

and is scheduled for completion next spring. The 11-story Merchandise Mart, with a floor area of 1.5 million square feet, will be ready for use in January, 1961. There is speculation that the Coliesum-Mart is being eyed as the site for the Southern Textile Exposition and the American Textile Machinery Exhibition.

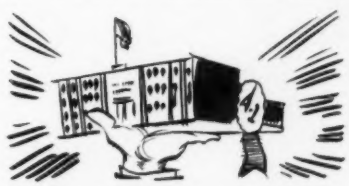
Pattern Chain Attachment. U.S. Patent 2,881,606 has been issued to Raymond F. Lanthier, Suffern, N.Y., for a device claimed to eliminate the pattern chains now used on multibar Raschel knitting machines. It can be applied to existing machines.

TWUA Asks Wool Fabric Ban. Textile Workers Union of America has called on Congress to place

an embargo on wool fabrics from the Prato district of Italy, because of reported substandard labor conditions in that area's mills.

"Offshore" Textile Purchases Defended. "Offshore" (governmentese for "foreign") purchases of textiles by the International Cooperation Administration have been defended before Congress by the State Department as a help to our industrialized allies. Spending for textiles in 1957 totaled $96.3 million, of which only $7.2 million went to U.S.A. mills. Much of this spending is later translated into purchases of American goods or services and helps to break down trade barriers, according to State Department spokesmen. Further, elimination of foreign bids would mean discrimination against efficient American producers, they said. The spokesmen also noted that foreign competition is a minor factor in the problems of the domestic textile industry, and that Japan and Hong Kong, our major competitors in the textile field, have received no ICA textile contracts.

Top Textile Companies Named. The names of textile companies



which it has certified as "Excellently Managed" have been announced by the American Institute of Management. They are Cannon Mills Co.; Cluett, Peabody & Co.,

Staley remodeled a molecule

Revolutionary New

COMPARE VISCOSITY STABILITY

SIZE USED	STORAGE KETTLE SECONDS* (AVG.)	SIZE BOX SECONDS* (AVG.)	SIZE BOX NORCROSS UNITS
Miralloid Gum	14.0	14.0	55-60
Native Noncongealing Starch	14.0	8.5-14.0	48-60

*Seconds = ¼ Inch Brass Cup measurements

In comparison tests over an eight-hour plant run, pastes of Miralloid Acetate Gum exhibited much better viscosity stability than Native Noncongealing Starch.

COMPARE WEAVING EFFICIENCY

SIZE USED	WARP STOPS PER LOOM HOUR
Miralloid Gum	0.315
Native Noncongealing Starch	0.32

In a Georgia mill, weaving performance of Miralloid Acetate Gum was better than the Native Noncongealing Starch they had been using. New Miralloid showed a 1.25% improvement in weaving efficiency.

COMPARE THEM YOURSELF

You can prove to your own satisfaction that new Miralloid Acetate Gum is a superior size for fine combed cottons and worsteds. Contact your Staley Textile Representative today and arrange for a plant trial.

to create a

Development in Sizings

—for Worsteds and Fine Combed Cottons!

New Basic Chemical Discovery . . . noncongealing Miralloid Acetate Gum out-performs all native starches! Sets new standards in uniformity! Makes possible controlled viscosity with greater resistance to break-down . . . reduced set-back and softer gels. Increases weaving efficiency up to 1.5% on cotton and as much as 3% on worsteds—yet actually costs you less!

Truly, here's a great new advance in sizing for worsteds and fine combed cottons . . . new Miralloid Acetate Gum, a unique thick-boiling acetylated starch.

Made possible only by an exclusive new chemical process, discovered and developed by A. E. Staley Mfg. Co., new Miralloid Gum costs less than native noncongealing starches, yet is definitely superior in many important ways.

With new Miralloid Gum there's never any guesswork. For it produces a size of stable viscosity with uniform and controlled moisture content. And thanks to new Miralloid's superior film-forming properties, weaving efficiency, too, is substantially improved. Thin spots, fuzz balls, matting on drop wires, and similar loom stoppers are greatly reduced, with corresponding reduction in costly down-time.

And with new Miralloid, faster slasher speeds are possible. For example, in sizing fine combed cotton, slashers can be operated as high as 150 yards a minute with minimum ends out of lease. Worsteds and worsted/synthetic blended yarns, sized with new Miralloid, have a 1% to 3% higher weaving efficiency—at 33⅓% less kettle cost than yarns sized with blends of starch and higher priced acrylic emulsion.

Particularly important is new Miralloid Gum's outstanding uniformity, both in physical properties and performance. From bag to bag, carload to carload, you can rely on Miralloid Gum to give you the same fine results every time.

Get all the facts on new Miralloid Gum today. See how it will fit into your operation. See your Staley Textile Representative or write: A. E. Staley Mfg. Co., Decatur, Ill.

Compare New Miralloid Gum with the Size You're Now Using.
Double-check These Money-saving, Profit-making Advantages!

1. Constant supply at a stable price.
2. Uniform and controlled moisture content.
3. Noncongealing at normal concentrations.
4. Better viscosity stability.
5. Greater resistance to viscosity break-down.
6. Set-back characteristics are markedly reduced.
7. Prepares quicker—requires 25% less cooking time prior to homogenization.
8. Minimum "scum" formation in size box even when slasher is stopped 1 or 2 minutes.
9. Provides excellent cooking kettle drainage.
10. Costs less.
11. Improves weaving efficiency.

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In actual day to day operation where the real worth of machinery is tested, Sims new Stainless Steel 75 psi reversed dished head 44 Dry Cans* are proven superior. They require less horsepower . . . are easier on bearings . . . and save floor space with no loss in drying surface. And the chain drive is on one side of the can, while the steam fittings are on the other side . . . permitting maintenance of the drive without time lost waiting for steam pipes to cool.
Furnished Teflon-coated if desired.

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Fabricated and installed at Lanett Bleachery and Dye Works, Lanett, Alabama by Sims Metal Works.

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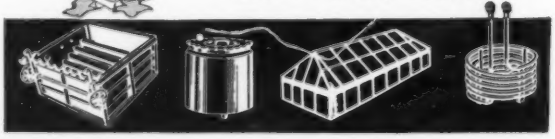

United States Supply Co.,
888 Broadway, East Providence, R.I.

Harley D. Hohm, Inc., 128 Buist Ave.,
Greenville, S. C.

Friday Textile Machine & Supply Co.,
Gastonia, N. C.

FABRICATORS SINCE 1928

Inc.; Pepperell Mfg. Co.; United Elastic Corp.; and West Point Mfg. Co. Firms are rated by a point system of appraisal in 10 key management functions.

New Textile Approach Needed. "We need a new management which has enough vision to realize that it takes more than cutting a price or underbidding a competitor to return stability and profitability to textiles," says Ralph J. Bachenheimer, of Iselin-Jefferson Co., Inc., in a recent issue of *Bobbin and Beaker*, student textile publication at Clemson College. The industry's approach should be to "stop apologizing for our products but go out and promote forcibly the many new fabrics produced in our mills," he said.

Woolen and Worsted Machinery in Place

Machinery	December 31 1958	1957	1949
Woolen Spinning Spindles	703,033	746,063	1,423,860
Carpet and carpet yarn mills	105,935	118,683	160,349
Other mills	597,098	627,380	1,263,511
Worsted Spinning Spindles	636,096	711,958	1,836,744
Worsted Combs	1,473	1,569	2,720
Tow-to-Top Machines	138	129	—

Source: Bureau of the Census.

Textiles Resist Inflation. Speaking before a recent meeting of the National Cottonseed Products Association, Robert C. Jackson, executive vice-president of the American Cotton Manufacturers

Labor-Management News

Milliken Cleared. A National Labor Relations Board trial examiner has found that Roger Milliken, president of Deering, Milliken & Co., was not individually guilty of violating the Taft-Hartley Act in liquidating the Darlington (S.C.) Manufacturing Co. in 1956, after Textile Workers Union of America won an election in the plant. TWUA announced that the ruling would be appealed.

Pay Hikes. Recent textile-mill wage increases: Berkshire Woolen Co., Pittsfield, Mass., 7½ cents an hour plus 2½ cents to a retirement-separation plan; Yale (Mich.) Woolen Mills Co., 10 cents an hour in a new one-year contract with Textile Workers Union of America;

Waumbec Mills, Manchester, N.H., 7 per cent; Fitchburg (Mass.) Yarn Co. group of three mills, 7 cents across-the-board (TWUA signed with Fitchburg for the lowest increase in the area, after a 25-day strike). Nine Jacquard weaving mills in Pennsylvania's Lehigh Valley signed a 16-cent package with TWUA after a one-day strike; about 1,000 Jacquard and novelty workers in the Paterson, N.J., area signed a similar three-year contract without a strike. Other mills signing 10-cent-an-hour contracts include Wyandotte Worsted Co., with four New England plants; Carleton Woolen Mills, Rochdale, Mass.; Bates Mfg. Co., Lewiston, Me.; Pepperell Mfg. Co., Biddeford and Lewiston, Me.; American Thread Co., Willimantic, Conn.; Ponemah Mills, Taftville, Conn.; Wm. Skinner & Sons, Holyoke, Mass.; Chicopee Mfg. & Sales Co., Holyoke, Mass.; Borden City Mfg. Co., Foster Spinning Co., and Sagamore Mfg. Co., all of Fall River, Mass.; and Oak Worsted Co., Vernon Textile Co., and Frankford Woolen Co., all of Philadelphia.

New Union Pacts. Mills newly organized by Textile Workers Union of America include Delaware Mills, New Castle, Del. (after extensive review by National Labor Relations Board of a December election); Regent Knitting Mills Ltd., St. Jerome, P.Q. (where employees transferred affiliation from Canadian Labour Congress); and Aberfoyle Mfg. Co., Bridgeton, N.J. (where employees rejoined after a lapse of 10 years—the plant was then located in Chester, Pa.).

To Probe Union Trouble. The Senate Labor Rackets Committee will hold public hearings to probe

violence in southern labor organization drives. Included on the docket will be hearings on the Franklin, N.C., hosiery mills situation, and the strike at the Harriet and Henderson Cotton Mills, Henderson, N.C.

Stop Assaulting Officials — NLRB. National Labor Relations Board has ordered Textile Workers Union of America mem-

bers to stop physically assaulting officials of Chas. Weinstein Co., Inc., spinners of woolen yarns in Worcester, Mass.

TWUA Rejected. Textile Workers Union of America lost elections recently at five southern plants. Employees at four J. P. Stevens & Co. mills in Roanoke Rapids, N.C., rejected the union, 1,164-885; and production and maintenance workers at Baxter, Kelly & Faust, Inc., Stoneville, N.C., voted down the union 100-28.

Hosiery Union Asks 30-Hour Week. Delegates to the recent annual convention of the American Federation of Hosiery Workers approved a resolution calling for a 6-hour day, 30-hour week, double time for over-time, and a $1.25 an hour minimum wage.

Sales upped 400% since Pogrelis-Meyer, Inc. started Heller Factoring

"Pretty Maid" casual wear was making many misses happy, but the Pretty Maid line presented problems to Harry A. Meyer and Ben B. Pogrelis; their company needed growth capital. That is why, in March, 1951, Pogrelis-Meyer Inc. became a Heller factoring client.

Since then, with the help of Heller service and counsel, the partners have been free to devote their energies to styling, producing and merchandising. Bad debt losses were eliminated, and so were the clerical expenses of credit, collection and accounts receivable departments. Capital has always been available, and it turns over faster, does more work, earns more. Buying has been advantageous. Overhead has been spread by pre-season production in this seasonal business. A bigger slice of the market has been won—a 400% sales increase since Heller service began.

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Here's a Thinking Man's Booklet— FREE

This 32-page Mill Maintenance Cleaning Guide provides valuable information for all thinking textile men vitally concerned with the necessity of reducing operating expenses.

How this booklet can help you:

This illustrated booklet describes maintenance cleaning as it is being done in many large textile mills today. Data is based on plant-proved procedures streamlined to give the most efficient cleaning at the lowest possible cost.

Indexed for quick reference, booklet describes how to speed up and simplify such jobs as:

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Institute, told his listeners that textile and apparel wholesale prices are 32 per cent below the level of other manufactured products. "This record has been achieved in the face of generally rising costs throughout the manufacturing segments of the economy —an almost unbelievable performance which the American public hasn't begun to appreciate," he said.

Research Emphasis Wrong — Blake. "Well intentioned but misguided thinking" has produced a flood of Congressional bills aimed

at greater utilization of farm commodities, including cotton, according to Wm. Rhea Blake, executive vice-president of the National Cotton Council. These bills ignore the fact that many of agriculture's greatest needs and opportunities are to be found in the areas of production and marketing research, he said.

Looms in Place in Broad Woven Fabric Mills

Type of Loom	Number in Place, December 31	
	1958	1957
Cotton and Man-Made Fiber Looms	421,965	443,098
Single-shuttle cam looms	292,699	309,325
Single-shuttle dobby looms	71,776	74,965
Multiple-shuttle (box) cam or dobby looms	43,669	44,435
Single- or multiple-shuttle (box) pile and Jacquard looms	13,821	14,373
Woolen and Worsted Looms	17,310	18,433
Pile and Jacquard looms	963	1,044
All other automatic looms, including weaving machines	14,797	15,896
All other nonautomatic looms, except narrow looms	1,550	1,493
TOTAL	439,275	461,531

Source: Bureau of the Census.

Grants to Ga. Tech. Cash grants and supplements totaling $28,200 for the 1959-60 fiscal year have been awarded to the A. French Textile School at Georgia Tech, Atlanta, by the Textile Education Foundation, Inc. Additional funds, up to $30,000, will be made available for machinery purchases on a matching basis with Georgia Tech funds.

Woolen Mill for Jamaica. Ground was broken in May for the 102,868-square foot plant of Jamaica Woollens, Ltd., West Indies subsidiary of George Pattinson & Co., Ltd., Preston, Ont. The plant will employ 300, and will weave and finish woolen blankets for shipment to markets in the Western Hemisphere.

Carpet Future Bright. America's carpet industry stands on the threshold of one of its most profitable growth periods, according to Charles B. Anderson, president of

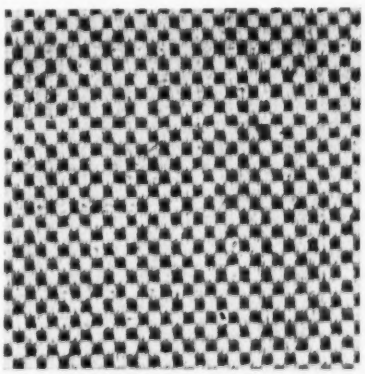
Roxbury Carpet Co. He bases his optimistic sales outlook on current market indexes, which show a near-peak in housing starts, and a growth in population, disposable income, and number of households.

Merchandising Notes

Allied Chemical highlighted the first appearance of "Certified for Performance" labels on carpets of its textured Caprolan nylon with sales promotions in six major cities across the country. First carpets to use the labels were those in Croft Carpet Mills' "Resort" collection.

Pellon Corp. is marketing three new nonwoven multidirectional fabrics, basically of nylon, for simplifying the construction of men's built-up coat fronts.

"Textil-Wirtschaft," German textile publication, has prepared a color-trend card for spring-summer, 1960, of interest to exporters of textile products. The card contains samples of wool and silk, dyed in five basic colors, and a group of five coordinate colors for apparel accessories. Copies of the card are available at $1; address the publishers at Freiherr-vom-Stein-Strasse 7, Frankfurt A.M., Germany.



All-jute "Basketweave Back" featured in C. H. Masland's "Bryce Canyon" carpeting line. The new nonwoven backing requires no stuffer, is claimed to simplify weaving, and eliminates need for latexing or back-sizing.

Du Pont Co. has announced that new licensing agreements for carpets carrying the company label require a double backing on all tufted carpets with less than 30 ounces per square yard of nylon in the pile. Labels will be issued by Du Pont for use only on first-grade carpeting. * * * Du Pont will include the National Association of Hosiery Manufacturers' "Seal of Approval" in its fall advertising of men's and children's stretch nylon socks. NAHM has announced plans to greatly expand its testing, approval, and enforcement activities in connection with the Seal. * * * Du Pont has published a booklet, "Why Synthetic Fiber Garments Should be Sewn with Synthetic Fiber Thread," which is aimed at the wash-and-wear market.

Roxbury Carpet Co. reports that a 66-year old carpet, made for exhibition at the Chicago World's Fair of 1893, and later involved in two major fires, is still usable. The rug was warp-printed, and all the colors, except a blue, have remained unfaded. The rug is now on display in Roxbury's New York office.

Using Salt Efficiently

by INTERNATIONAL SALT COMPANY, INC.

How Flow Characteristics of Salt Affect Storage and Feeding Designs

If you're planning to install new salt-storage and brine-making facilities or enlarge existing ones—or if you'd like to make your present setup more efficient—here's information that can help you.

Referring to the table, you will note that most sizes of Sterling Rock Salt commonly used to make brine have an angle of repose of 32° from the horizontal. But the angle of slide for salt on chute materials differs according to salt size and the material used. This angle ranges from 20° for smooth glass, plastic or highly polished steel to 54° for sawed wood or rough concrete.

These two principles of salt flow influence brine-making installations in three distinct ways: in storage-bin design, in computing the minimum slope for salt-feeding chutes, and in determining the proper clearance between chute opening and the salt dissolver.

1. Storage-bin design. It is sometimes thought that a salt-storage bin placed above a dissolver should incorporate a sloping hopper, so that salt will flow out freely through the opening in the bottom. This extra expense in bin construction, however, may not be necessary. The angle of repose guarantees that salt, as it pours through the discharge opening in a flat-bottomed bin, will form its own sloping bottom. What's more, the salt that doesn't flow out on its angle of repose will remain in dead storage for use in emergencies.

2. Slope of feed chutes. In some plants, local conditions make it impractical for an overhead storage bin to be exactly above the dissolver. No matter. Rock salt's varying angles of slide permit continuous salt flow in *sloping* chutes. Though a standard 45° slope is recommended because of its built-in insurance against clogged chutes, flatter slopes are possible with certain chute materials. See table.

3. Chute-to-dissolver clearance. The constant 32° angle of repose for the larger sizes makes it possible to determine just how much clearance there should be between chute opening and dissolver, to insure a full dissolver at all times. Your Sterling representative can supply data for different chute and dissolver diameters.

SIZES OF STERLING ROCK SALT	NO. 2	NO. 1	CC, A, C	FC
ANGLE OF REPOSE Salt on Salt	32° ± 2°	32° ± 2°	32° ± 2°	47° ± 6°
ANGLE OF SLIDE Glass; Smooth Plastic; Highly Polished Stainless Steel	20° ± 2°	21° ± 2°	21° ± 2°	30° ± 6°
Carbon Steel with Smooth Mill Scale; Medium-Polished Stainless Steel; Monel Metal	28° ± 2°	29° ± 2°	29° ± 2°	37° ± 3°
Carbon Steel (Heavily Rutted and Pitted); Smooth-Planed Wood; Smooth Concrete	29° ± 2°	31° ± 2°	33° ± 2°	44° ± 3°
Rough-Sawed Wood; Rough Concrete	38° ± 2°	41° ± 2°	41° ± 2°	54° ± 6°

Table gives Angle of Repose of salt on salt and Angle of Slide on various surfaces for several crystal sizes of Sterling Rock Salt.

Further data on rock salt characteristics is contained in a free booklet, "Brine for Today's Industry." This comprehensive booklet also has valuable technical information on many aspects of storing, handling or using salt. Send today for your free copy.

50 years of salt experience can benefit your company. From 50 years' field experience and a continuing research and development program (the first ever established in the salt industry), International has accumulated an unequaled amount of technical data on salt—its production, properties and uses. Our engineers will be glad to make this information available to you without charge. They can also help you select the right salt for your needs—from the complete line of premium-quality Sterling Rock and Evaporated Salt. Contact your nearest International Salt Company sales office, or write to us direct.

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RECENT TECHNICAL AND COMMERCIAL DEVELOPMENTS

by J. B. Goldberg
Consultant to the Textile and Allied Industries
Exclusive

FIBERS AND YARNS

Beaunit Polyester. "Vycron" is the name adopted by Beaunit Mills for its new polyester fiber, yarn, tow, and direct-spun yarn. Commercial production is expected to have begun at the company's Elizabethton, Tenn., plant by the time this appears.

Improved Darvan. B. F. Goodrich Chemical Co. has developed an improved Darvan nytril fiber (Type X-7), said to permit dyeing at the boil with colors that have good fastness properties.

MACHINERY AND PROCESSES

Knit Length Control. A Swedish underwear manufacturer has disclosed a new attachment for application to almost any knitting machine to control yarn length. The device weighs about one-half pound and will sell for about $10.

New Carpet Machine. The English Crabtree cut-pile needle Axminster loom produces carpet on a prewoven jute backing. Operating speed is above that of conventional looms but below that of tufting machines. High efficiencies with suitability for producing high-quality wool carpeting are claimed.

Shuttle-Changing Loom. The Japanese loose-reed Tsudakoma loom, designed for weaving fabrics of fine spun yarns and filament yarns, features a two-cell shuttle-changer which holds ten shuttles in each section.

FABRICS AND FINISHES.

Bacteriostatic Finish. "Eversan," an organic zinc compound developed by Ion Exchange & Chemical Corp., is making its first appearance in handkerchiefs made from fabrics processed by Standard Bleachery & Printing Co. Application is by a two-step process, and the finish is reported to withstand up to 60 hand washings. Chemical price is 60¢ per pound, with estimated finishing cost of 3¢ per yard for sheeting.

Heat-Resistant Fabric. A recent U. S. patent covers a fabric comprised of an outer layer of yarns with a high degree of heat resistance and a filler of yarns composed of conventional textile fibers and a substantial portion of dynel staple.

Coated Fabric. A New York inventor has patented a woven fabric with hollow microspheroids of low heat conductivity attached to the surface with a binder.

Washable Wool Fabric. The Swedish Textile Research Institute is reported to have developed a washable wool fabric, called "No-Press," but details have not been disclosed.

Granular Vat Dyes. England's Imperial Chemical Industries Ltd. is making available certain vat dyestuffs in grain form. These "SQ" grains are designed for continuous dyeing involving padding, and claims are made for a low tendency to migrate during drying, and a high reduction rate. Good dispersions are obtainable without the use of dispersing or wetting agents.

Dyeing Acrylic Blends. Geigy Dyestuffs reports development of a new one-bath method for dyeing Orlon-wool, Orlon-cellulosics, and dynel-wool blends. The "IT" method involves use of selected basic and direct dyes or basic and neutral acid dyes. Dyeing reportedly can be done on conventional equipment and the cycle can be reduced to the time needed for dyeing natural fibers. Need for very careful selection of the base color and companion shades is emphasized.

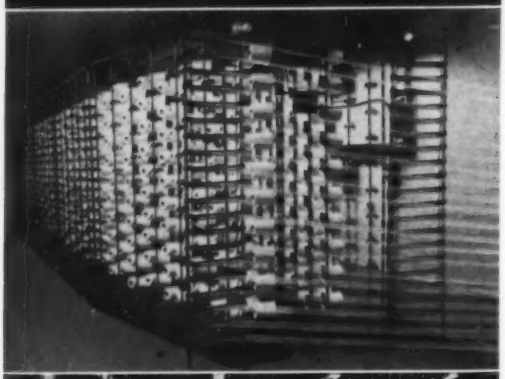
Oil-, Water-, and Soil-Repellant Finish. Minnesota Mining and Mfg. Co. is offering a new "Scotchgard" finish for washable and wash-and-wear fabrics, suitable for cottons, synthetics, and blends. The finish is claimed to be resistant to at least five machine or commercial launderings, and to dry cleaning, as well as fast to as many as 20 washings under standard test conditions. First textile licensee is Burlington Industries, with fabrics scheduled to be marketed in spring, 1960.

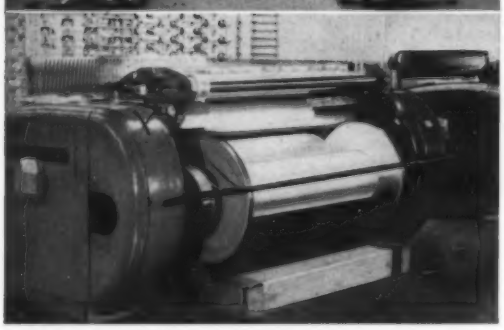
TEST METHODS

Cross Section Study. A silver staining technique for examination of rayon fiber cross sections is considered a measure of degree of accessibility or crystallinity of the cellulose sample involved.

Fabric Quality. National Association of Shirt, Pajama and Sportswear Manufacturers and American Society for Quality Control have prepared a formula for the evaluation of woven textiles, with a manual of defects and imperfections. Usage is not mandatory, but it is hoped that this formula (after a trial period and changes to be made if constructive criticism is offered) will serve as a basis for fabric merchandising.

Flammability Standards. National Fire Protection Association has approved new standards and a test method for evaluating flammability of wearing apparel. The apparatus differs from the tester approved by American Association of Textile Chemists and Colorists, and four new tentative classes of flammability have been established. AATCC has registered objections to these new standards and the test method, noting that ease of ignition and heat intensity are ignored. Also, the ten-inch samples used for testing are considered unnecessarily bulky.





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Leading mills everywhere rely on this equipment because of its speed, high quality production, versatility, convenience, and economy.

Cocker Tricot Warper Model MB 55-32 (Top Photo)

Handles 2-21″, 1-42″, 1-55″ Beams, or 1-50″ or 2-25″ Raschel beam with simple changeover from one set to another. Individual controls, in full view and easy reach of operator. Has all modern features and safety devices. Normal sustained speeds up to 600 YPM.

Cocker Horizontal Type Magazine Cone Creels (Second Photo)

Standard creel is built to take four pound packages but can be built to take larger packages. Takes any type package. Cone holders are arranged to swing around inside the "V" for re-creeling without interfering with the operation of the machine. Equipped with electronic eyeboard stop motion. A wide range of tensions is available.

Cocker Vertical Type Magazine Cone Creel (Third Photo)

Available in true vertical or magazine . . . equipped for any type package. Tensions are new improved type with adjustable posts for varying tensions in the yarn. Tensions can be run on light yarns without washers, or washers can be used on one or both posts when yarn requires it. Electronic stop motion available.

Cocker High Speed Spindle Driven Warper (SD-49) (Bottom Photo)

Will handle any type yarn. Produces unexcelled synthetic warps from finest deniers to heaviest tire cord yarns. Takes section beams with flanges up to 40″ dia. Produces warps of any desired density at speeds up to 1000 YPM.

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EXECUTIVE VIEWS

Prepared by a man who is closely identified with the textile industry.

"We must have what we want"

ONE OF the most controversial pieces of legislation to be introduced in Congress in a good while is working its way through that body as this is written. This is the co-called "Labor Reform" Bill introduced by Senators Kennedy and Ervin.

The exposures of the McClellan Committee have made it amply clear that extensive reforms in our ridiculous one-sided labor laws are far past due, but the people who run these powerful labor unions will fight like tigers to hang onto the grossly unfair privileges which have been granted to them in previous legislation. It looks very much as if there are enough members of Congress who are subservient to the labor unions to pass the kind of innocuous "reform" law that the labor leaders will approve.

We may reasonably feel that any such law which is approved by the big labor monopolists is a bad law. A law that met with the approval of burglars could hardly be expected to stamp out burglary. And the kind of labor reforms we need are some that will make these union leaders very unhappy, by bringing equity and justice into the management of labor relations, where these virtues have been conspicuously absent for many years. One of the favorite slogans of the labor union people is, "We *must* have what we want," and for them to want it is enough to justify the use of any means to get it.

RECENTLY, the Supreme Court ruled that a state cannot fine a labor union as punishment for trying to wreck an employer's business. The reasoning, obviously, must be that a union has a legal right to wreck the business of anybody who refuses to grant the union demands. Nobody has to be familiar with the findings of the McClellan Committee to know this, since it is only necessary to read the newspapers to get a crystal clear picture of labor racket policies everywhere in forcing acceptance of union demands.

As this is written, a very serious disturbance is going on in Henderson, N. C., where a strike has been in progress against the Harriet-Henderson Cotton Mills for months. We have been told that this strike was not over wages or general working conditions, but had to do with matters primarily beneficial to the union rather than to the workers.

The usual violence accompanied this strike, with dynamitings and shootings. After several months, the mill owners decided to try to open the mills and run them with new help, and apparently had considerable success with this effort, so that the union finally called off the strike.

A newspaper report said that only about 25 union members out of 900 voted to continue the strike. The very next day, violence of an even worse nature broke out because all the strikers were not put back to work.

This was an excellent example of the "we *must* have what we want" mentality. These strikers had done their best to wreck the business of these mills, and yet they insisted that the people who did want to work for the mill be discharged to make room for strikers who didn't, and who were only constrained to go back to work because they saw other people taking their jobs.

THE SITUATION today is not only critical, but desperate, as the labor rackets seem to have a working majority in Congress.

Unless the working people of the United States can be made to realize what an out-and-out labor government could mean to this country, we will surely have one. It is only necessary to see what a labor government did to Great Britain to regard with the utmost concern the possibility of the same thing happening to us. The British

USED IN TEXTILE MILLS AROUND THE WORLD

BARBER COLMAN

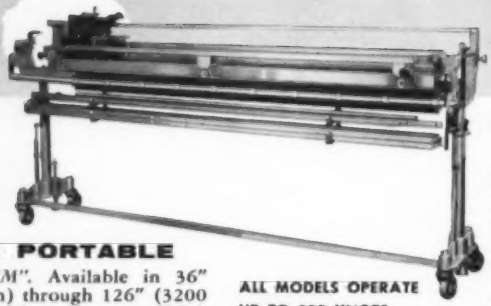
WARP TYING MACHINES

FOR

COTTON • WOOL • LINEN • WORSTED

MOHAIR • SILK • SYNTHETICS

SUITABLE MODELS FOR ALL CONDITIONS



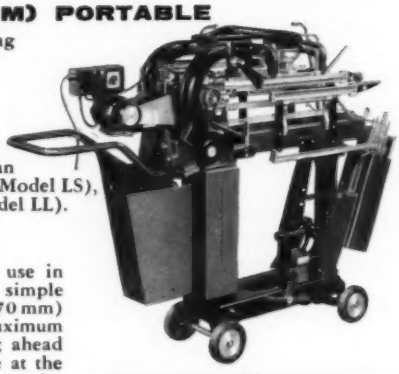
WIDE PORTABLE

Model "M". Available in 36" (915 mm) through 126" (3200 mm) maximum warp width capacity. Multiple frames permit advance loading. Three types provide different methods of selection.

ALL MODELS OPERATE UP TO 325 KNOTS PER MINUTE CONTROLLED BY VARIABLE SPEED MOTOR DRIVE

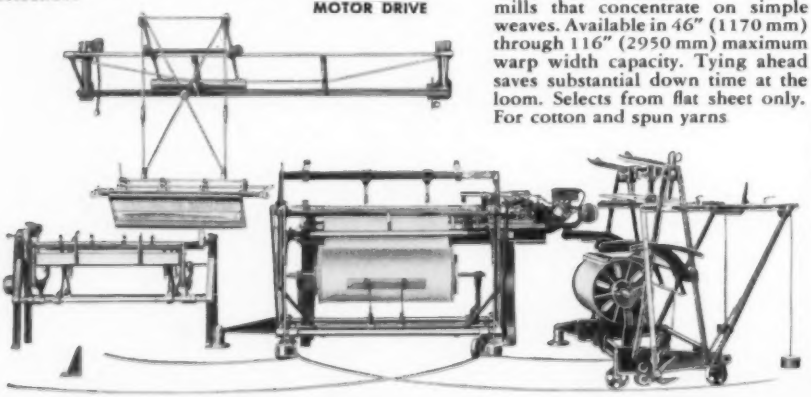
15" (380 MM) PORTABLE

Model "L". For tying at or away from the loom as well as in congested areas. Three types provide selection from flat sheet (Model LC), from an end-and-end lease (Model LS), or from either (Model LL).



STATIONARY

Model "EL". Designed for use in mills that concentrate on simple weaves. Available in 46" (1170 mm) through 116" (2950 mm) maximum warp width capacity. Tying ahead saves substantial down time at the loom. Selects from flat sheet only. For cotton and spun yarns



ALL THE NEWEST BARBER-COLMAN MACHINES WILL BE SHOWN AT THE AMERICAN TEXTILE MACHINERY EXHIBITION

ATLANTIC CITY, N.J.
MAY 23-27, 1960

Plan now to be there

AUTOMATIC SPOOLERS • SUPER-SPEED WARPERS • WARP TYING MACHINES • WARP DRAWING MACHINES

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labor unions are ultraconservatives compared to the extortion rackets that flourish in this country, and Heaven help us if they get complete, undisputed control of the machinery of government.

We have felt for years that the business leaders of the United States have done an outstandingly poor job of making the public understand what the existent policies of these labor racketeers were doing to the country. Business leaders seem to be entirely too content to grant even the most fantastic demands of the labor extortionists, and pass the bill on to their customers.

Practically nobody in the upper reaches of Big Business seemed willing to make an issue of the matter of wage spiral inflation. Many small employers have constantly been fighting the labor racketeers, but the big employers seem to be completely cowed by them.

IN THE March *Reader's Digest*, an article by T. Coleman Andrews, former U. S. Commissioner of Internal Revenue, included a chart showing how much income you needed in 1957 just to keep even with the purchasing power of your 1939 income. A man who had an income of $2000 a year in 1939 would have had to make $4806 in 1957 to break even. His taxes would have been increased $755 since 1939.

An executive who made $10,000 a year in 1939 would need to make $30,971 in 1957 to have the same purchasing power. His taxes would have been increased by $11,066, so that his tax alone in 1957 was substantially more than his whole income would have been in 1939.

Of course, as you go up the scale the situation becomes more appalling. A major executive in 1939, making $30,000 a year, would have to get $162,689 in 1957 to have the same purchasing power, and this man's taxes would have been increased $104,876, or approximately three and one-half times the amount of his 1939 salary.

Back in 1939, before the labor rackets got control of the economy and started this insane wage spiral rat race, $2000 to $3000 a year was a good income, and today to have the same purchasing power, the same person must make $5000 to $7500.

The United States is not a bankrupt country, desperately and hopelessly resorting to inflation. The United States is the richest country in the world and well able to stabilize its economy, balance its budget, take care of its national defense needs, and any other legitimate national needs if the people want to do that.

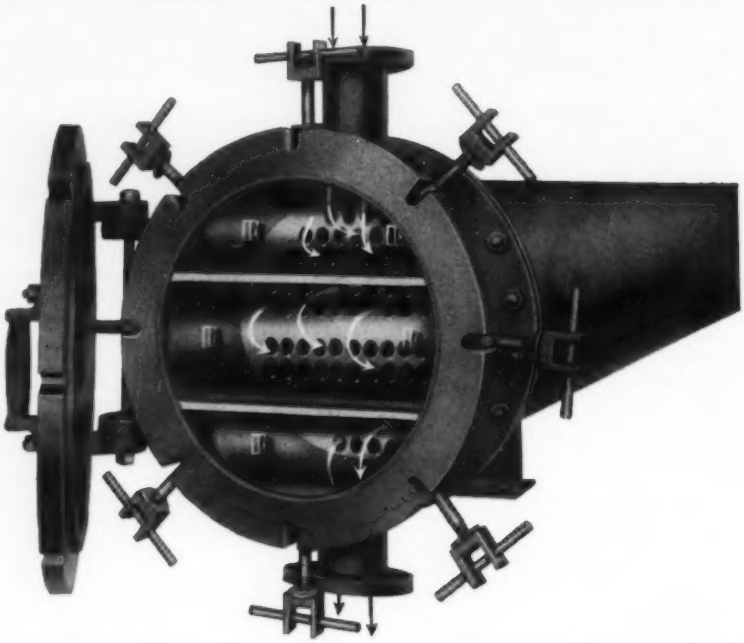
The answer rests with the people, and the business leaders of the country who should have been educating the people in the facts of economic life have almost completely neglected any effort to do this. Maybe it is too late to start now, but if we don't start, and start vigorously, it certainly will soon be too late.

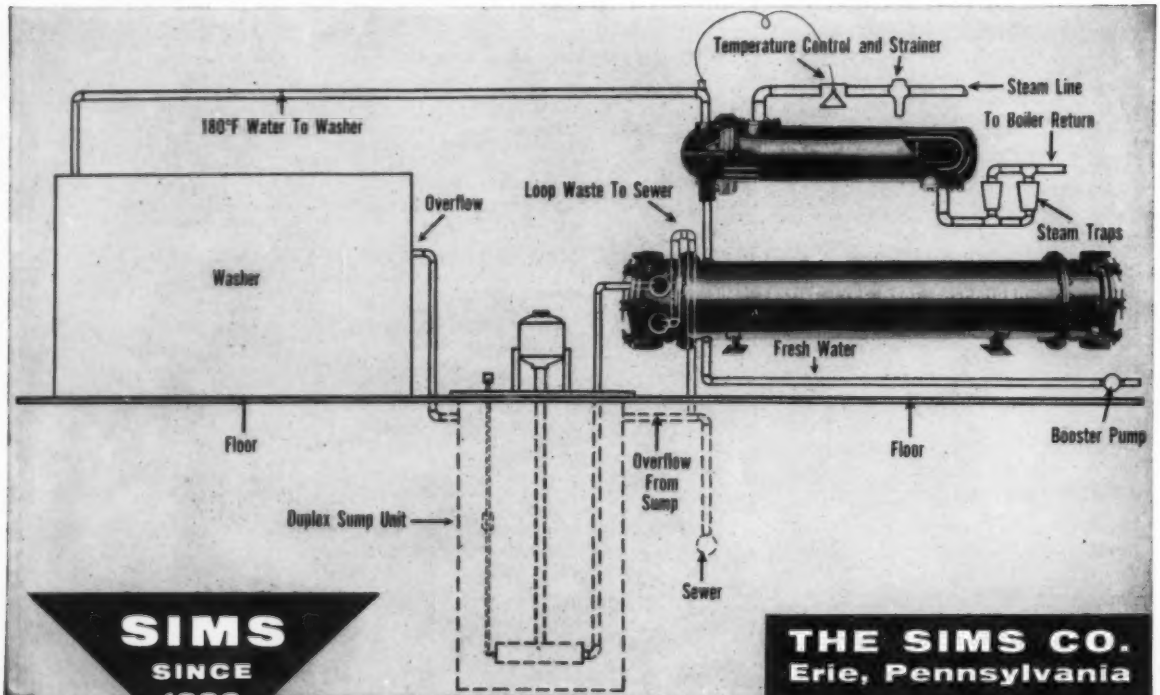
FUTURE EVENTS

Date		Event	Location
July	15-18	Southern Industrial Relations Conference	Blue Ridge Assembly Blue Ridge, N. C.
Sept.	9-11	Council, Council Committees, Research Committees AATCC	Hotel McAlpin New York City
	10-11	Fiber Society, Inc.	Princeton, N. J.
	10-21	3rd International Textile Exposition	Samples Fair Grounds Milan, Italy
	12	Southeastern Section AATCC	Ida Cason Callaway Gardens Pine Mountain, Ga.
	17-18	Combed Yarn Spinners Association, 34th Annual Convention	The Cloister Sea Island, Ga.
	17-18	Chattanooga Yarn Association outing	The Read House Chattanooga, Tenn.
	18	Northern New England Section AATCC outing	Wachusett Country Club West Boylston, Mass.
	28-29	American Gas Association Textile Processing Symposium	Sedgefield Inn Greensboro, N. C.
Oct.	1-2	Textile Quality Control Association	Grove Park Inn Asheville, N. C.
	3	Textile Operating Executives of Georgia slashing and weaving discussion	Georgia Tech Atlanta, Ga.
	7	Chemical Finishing Conference	Mayflower Hotel Washington, D. C.
	8-9	Southern Textile Methods and Standards Association	Clemson House Clemson, S. C.
	8-9	North Carolina Textile Manufacturers Association convention	Carolina Hotel Pinehurst, N. C.
	8-10	AATCC National Convention	Sheraton Park and Shoreham Hotels Washington, D. C.
	10	Alabama Textile Operating Executives carding and spinning discussion—9:30 A.M.	Langdon Hall Auburn, Ala.
	15-16	Quartermaster Association Annual National Convention	Hotel Statler-Hilton New York City
	17	Textile Education Foundation, Inc.	Georgia Tech Atlanta, Ga.
	27	Institute of Textile Technology technical advisory committee and board of trustees	I.T.T. Charlottesville, Va.
1960			
Feb.	8-9	National Cotton Council annual convention	Dallas, Texas
Apr.	7-9	American Cotton Manufacturers Institute convention	Americana Hotel Bal Harbor, Fla.
May	23-27	American Textile Machinery Exhibition	The Auditorium Atlantic City, N. J.
Oct.	3-7	Southern Textile Exposition	Textile Hall Greenville, S. C.

Takes only minutes to open, flush clean and close a SIMS TEXTILE HEAT EXCHANGER

Quick opening doors at each end swing wide open for full access. 1¼" diameter straight tubes of stainless steel or copper permit straight-thru flushing. Cleaning periods are extended because Sims' design resists linty accumulations. Highly polished tube plates with wide belled tubes provide non-clinging surfaces—removable, smooth curved, stainless steel baffles speed return flow to maintain proper velocity for uniform efficiency and active flushing action to carry linty deposits to the sewer. You can be sure that a Sims Exchanger is clean because you can see it. Let Sims survey your needs. Ask for Bulletin TE-2.





SIMS SINCE 1886

THE SIMS CO.
Erie, Pennsylvania

Manufacturers of Exhaust Gas Boilers • Storage Water Heaters • Heat Exchangers • Feed Water Heaters • Steam Separators • Quenching Oil Coolers • Oil Heaters • Caustic Soda Recovery Equipment • Commercial type Instantaneous Water Heaters

Textile Industries
FOR JUNE 1959

Fruit of the Loom's water needs are supplied by Pawtuxet River. It flows rapidly and in enough volume to handle the dilute caustic wastes from mercerizing, but prevention of stream pollution, plant policy for years, made caustic recovery system desirable.

Staff prepared
Exclusive

A modern caustic recovery system reduced stream pollution and helped Pontiac to

USE 59% LESS CAUSTIC

IN RECENT years, the Pontiac Division of Fruit of the Loom, Inc., a bleachery and print works located at Warwick, R. I., has completed several major projects as part of a continual program to reduce costs.

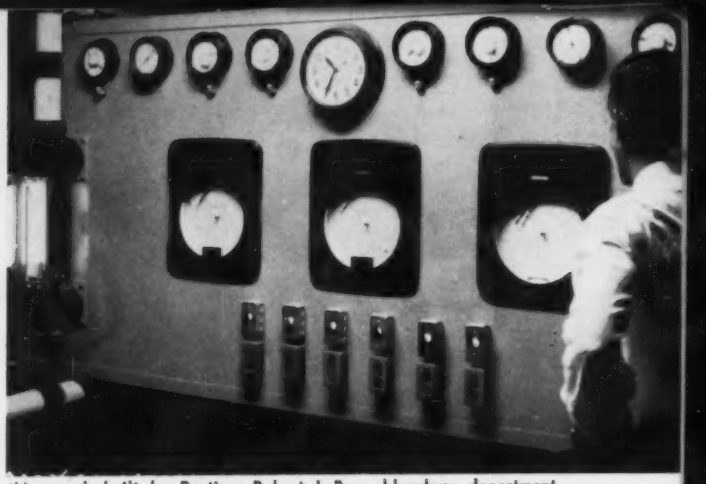
Among the earlier projects was the installation of a continous bleaching range, which, incidentally, called for ingenious planning to fit the component units into the available processing area. At least one of the component units had to be specially built to Pontiac's specifications. For Pontiac's plant is not only of multistoried construction, but also of unusually narrow width, built originally for spinning operations.

Another project that followed resulted in a streamlined mercerizing operation. The high-speed range which was designed and assembled by Pontiac has now been in operation more than five years. Fabrics are mercerized "in the wet," rinsed free of caustic, dried, and batched on the floor above, in one continuous operation.

Upon completion of these projects, which significantly reduced processing costs, management began to look for economies elsewhere. A study showed that recovery of heat from processing operations would result in substantial fuel savings over a long period of time. Accordingly, a suitable heat recovery system was installed.

Next, management began to take a long and hard look at caustic consumption in mercerization. Since virtually all of Pontiac's

In marcerizing, caustic is applied on conventional three-roll padder. After marcerizing, caustic is removed from fabric by series of washing operations: six suction units, circulating sprays, tanks, pumps, heavy set of squeeze rolls, and a multiple-nip open washer, in that order. Diluted caustic liquor (wash water) is counterflowed from delivery end of washer back through entire washing operation, increasing its concentration until it reaches the first circulating spray tank, seen in the foreground. Wash liquor, now containing 3-8% caustic, is pumped to storage tank. Counterflow saves large part of heat used in washing, and also gives better control of used caustic pick-up.



Right: Process is controlled by instruments on this panel, built by Pontiac. Robert LeBrun, bleachery department head, makes a routine examination of instrument readings during an evaporation cycle. Gauges in top row indicate pressure and temperature of incoming and outgoing water, vacuum and pressure at various stages of the process. The three recording instruments are for steam flow, vacuum, and boiling-point rise. Specific gravity of outgoing caustic is measured manually. Pilot lights above switches in lower part of board are for pumps in system. Entire process shuts off automatically in event of equipment failure, excessive rise in boiling point (which controls caustic concentration), etc. Rotameter to left of panel is for accurate feeding of 4-6% caustic.

huge production is mercerized, either at full or reduced caustic strength, management believed that a study of caustic recovery systems was justified.

But aside from the dollar savings that caustic recovery could offer, there was another equally important and compelling reason for initiating the study. For Pontiac had in effect a long-range program to prevent stream pollution. Recovery of the caustic would also mean complete elimination of high alkalinity as a stream contaminant, even though the dilute caustic wastes were not overburdening the Pawtuxet River.

Efficient Caustic Recovery Called for. Caustic recovery systems in the textile industry are not new. But the systems of concentrating caustic by evaporation, which many bleacheries had found economical in earlier years, were no longer efficient in today's highly competitive finishing industry. Only a system that utilized automatic controls to reduce supervisory costs, and one that would be economical to operate and maintain as well, could be considered by Pontiac.

Toward this end, Solvay Process Co., made a survey of Pontiac's caustic consumption, which showed that efficient caustic recovery would effect substantial savings. As a result, the Swenson Evaporator Co. designed and built a double-effect evaporator after a study had been made of evaporator capacity requirements, steam requirements, instrumentation, and auxiliary facilities.

The evaporator was installed in early 1958 by Pontiac's mechanical crew, under the direction of Fred J. Johnson, plant engineer.

The accompanying photographs and flowsheet of the caustic recovery system indicate the simplicity of its operation; it is instrument-controlled and so requires little attention.

The double-effect evaporator is easily capable of evaporating at the rate of 10,000 pounds of caustic per hour. This is equivalent to concentrating 20 gallons of 4-6% caustic to 2-3 gallons of 40% caustic every minute, and cooling it for reuse.

At the end of a cycle of evaporation, the heat in the condensation, and steam used for vaporization, are reclaimed with an after-condenser. The cooling water from that unit plus a smaller amount from a product cooler is pumped at an average temperature of 125 F to the process water storage tank and reused for that purpose. Therefore, the reclamation of this heat practically cancels out the cost of steam used for evaporation.

59% Saving in Caustic and a Cleaner Stream. Pontiac's caustic recovery system has been in operation long enough to make comparison of caustic consumption with an earlier period meaningful. E. L. Clifford, vice-president and general manager of Pontiac, summarizes the resultant savings in caustic:

"During the second quarter of 1957, before evaporator installation, we were using 74.9 pounds of new caustic per 1000 yards of mercerized fabric, as against 30.5 pounds of new caustic per 1000 yards of mercerized fabric in the second quarter of 1958, after evaporator installation. We are now purchasing only 41% of the caustic previously required."

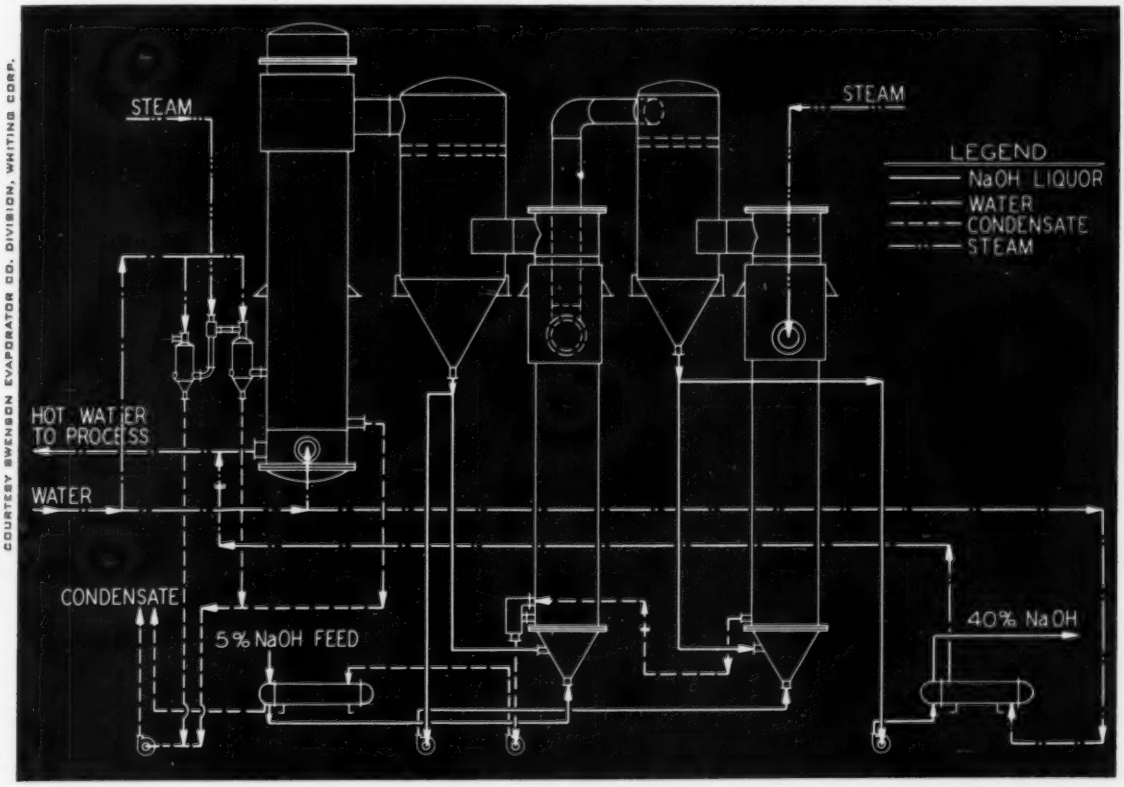
These figures apply to fabrics mercerized at various degrees of strength; the fabrics average out to about four yards per pound.

Because of the 59% reduction in new caustic purchases, plus the unusually low cost of operations, Mr. Clifford estimates that under a normal plant operating schedule, the entire cost of this unit can be written off in less than 18 months.

This latest of Pontiac's completed projects has certainly met the important requirement of reducing operating costs, an ever-present consideration to a northern finishing plant. But Pontiac's E. L. Clifford points to the project as having first met an important goal in the program of preventing stream pollution.

Elevated portion of the double-effect evaporator, which was built to Fruit of the Loom's specifications and installed by the plant's mechanical crew. It is located in the kier room, next to the mercerizing department. Nine kiers are used for storage of caustic.

Double-effect evaporator. Feed is to second effect, from which semi-concentrated liquor is pumped to first effect for removal of more water. Evaporation is done in a vacuum. Besides concentrating caustic to 40%, system supplies hot water for the mill.



Cotton research

Highlights of the 10th Cotton Research Clinic

Session chairmen at the 10th Cotton Research Clinic, l-r: Robert W. Smith, president, Lowenstein Cotton & Storage Corp.; J. M. Cheatham, president, Dundee Mills (general chairman); and Willard W. McLeod, vice-president, Coats & Clark, Inc.

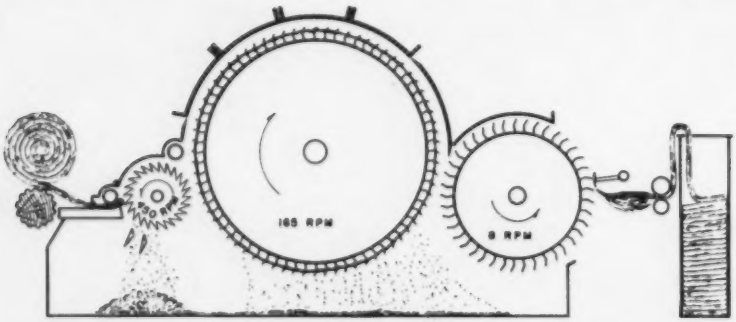
Staff Report

MILL MEN, textile researchers, and representatives of allied interests gathered more than 270 strong at the Grove Park Inn, Asheville, N. C., on May 12 for three days discussion of the latest developments in cotton fiber and processing research.

Under the sponsorship of the National Cotton Council, the meeting heard reports of cotton research conducted in laboratories from Maine to Texas. The subjects of the papers presented ranged from interim reports on research still in progress to descriptions of the application of equipment now available commercially.

Abstracts of some of the significant reports presented are given on this and the following three pages.

The SRRL flatless card



■ MECHANICAL DETAILS of the granular (flatless) card (described in TEXTILE INDUSTRIES for May, 1959, p. 78) were outlined by A. L. Miller and R. S. Brown of Southern Regional Research Laboratory.

The design consists generally of an aluminum-oxide granular carding surface opposed to the surface of the main cylinder, and a relatively small metallic wire clothed roll above the licker-in to pre-

ABOVE: Schematic view of the SRRL Granular card. BELOW: Left—Close-up of card, showing aluminum top in position. Right—Hand rollers used for applying granular material, which is in sheet form with pressure-sensitive adhesive backing, to top plates.

open the tufts before carding. There is also recommended, but not essential, a modified licker-in and feed roll cover which improve the cleaning action of the mote knives through a reduction of the air pressure above the licker-in.

The aluminum oxide carding surface, which replaces the flats, is fixed and rigid; it cards without loading and requires no attention during normal operation. The granular material is secured to four curved aluminum top plates, each 16″ x 42″ and machined to extremely close tolerances. These plates cover the area occupied by the flats on a standard card.

The granular material was said to cost about $18 per card; it can be applied in under two hours. It is expected to have a life of about six months in three-shift operation.

Mill Tests. A preliminary report of the operation of the granular card under mill conditions was given by G. P. Callaway of Avondale Mills. The granular top was tested on a Saco-Lowell 40″ card equipped with conventional clothing—100 wire on the cylinder and 110 on the doffer— at Avondale's Central Plant (sales yarn). A second test was conducted at the Eva Jane Plant (coarse colored yarn fabrics), again using a Saco-Lowell 40″ card, but equipped with metallic wire.

In terms of yarn quality, performance of the SRRL card was substantially the same as the regular cards in both mills, at the same production rates. Important advantages of the SRRL card were stated to be minimum care and maintenance, lower weight, complete elimination of flat strips, and reduced operating costs.

TABLE 1. Card Waste

	Central Plant[1]		Eva Jane Plant[2]	
	SRRL %	Std %	SRRL %	Std %
Flat strips	0	2.82	0	1.23
Cylinder strips	0.81	0.73	0[3]	0[3]
Doffer strips	0.16	0.14	0[3]	0[3]
Motes and fly	1.72	1.25	1.77	1.51
Sweeps	——	——	0.23	0.26
Invisible loss	——	——	0.09	0.26
TOTAL	2.69	4.94	2.09	3.26

[1]Cotton: SM, 1 1/16″; fiber fineness, 4.16. Card productions: 10.9 lb/hr at 100% efficiency, 50-grain sliver. Pounds in test not given.

[2]Cotton: SLM Bright 1″; fiber fineness, 3.83. Card production: 15.95 lb/hr at 100% efficiency, 58-grain sliver. Composite of two tests totaling 264.8 lb. fed.

[3]Metallic clothing.

TABLE 2. Test Results

	Central Plant		Eva Jane Plant	
	SRRL	Std	SRRL	Std
CARD				
Neps/100 sq in	9.2	10.3	30.9	29.3
Sliver var (Uster), %	2.8	2.9	2.8	2.1
YARN				
Count, av	31.6	30.3	14.2	14.5
Single strand strength, lb	0.48	0.51	——	——
Skein strength, lb	67	68	138	131
Count-strength product	2117	2060	1960	1900
Elongation, %	5.5	6.3	——	——
NU (Uster), %	15.4	15.9	16.0	16.0
Appearance grade	B—	B+	——	——

Massive cotton blending for mill production

by David E. Howe and Joe F. Mattison
American Thread Co.

Mr. Howe

■ WE HAVE attacked the problem of variability in cotton by extensive testing and careful mixing, and have had satisfactory results for the most part, but at two of our mills we have now imposed a massive preblending program in addition to testing and "specification buying," and have had far more satisfactory results than ever before.

We still maintain the strictest possible controls over buying, classing, testing, and mixing, but we also open 100 bales from the various shippers' lots, blend these, rebale them, and follow our usual practices in the opening room later.

This has yielded a spectacular reduction in variable color of yarn, uniformity of fiber fineness is twice as good as before, ends down at spinning are appreciably lower and less variable, neppiness is lower and more stable, clearer waste has been reduced 5 to 10%, and yarn strengths show less variation with the same breaking strengths as before.

We blend according to Micronaire, we blend for color, and we blend across grades in certain instances. More than that, we blend

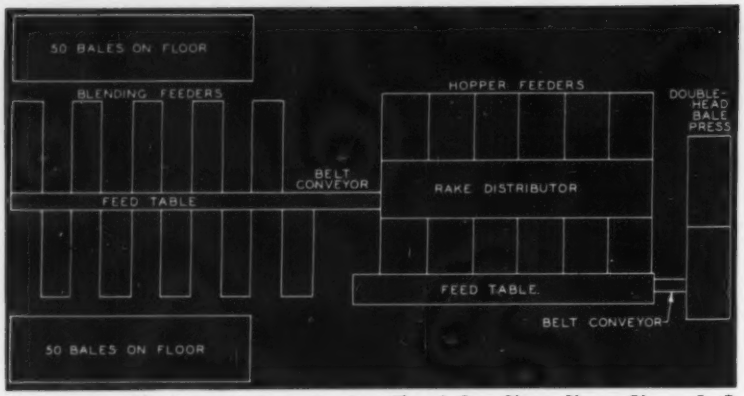


Diagram of preblending equipment, American Thread Co., Clover Plants, Clover, S. C.

across various shippers' lots; we blend to maintain the greatest continuity of mix, minimizing abrupt raw stock changes; and, of course, we blend very carefully from one crop year to the next.

Blending System. Our blending layout, shown in the illustration, takes up about 9,000 sq ft. Ten new G-10 blending feeders are lined up back-to-back, with five on each side. Fifty bales are laid down on each side of the room—100 bales to feed the 10 feeders.

A feed table conveys the stock to an inclined apron, which feeds an overhead rake distributor. The rake distributes cotton to six F-5 hoppers, which dump onto another feed table leading to an inclined apron loading a double-box bale press.

In feeding the blenders, our operator first makes a multibale sandwich which is fed to all five feeders on one side, and then the other five feeders are loaded from bales on the opposite side of the room. Bales are opened on the third shift, allowed to bloom, and blended on the first and second shifts.

There is no cleaning equipment in the line; the cotton receives a minimum of handling. A stop-motion prevents recycling of the cotton.

We have designed our 100-bale blends to contain at least four distinct lots. Preblended bales are weighed, tagged, and stored for later use in the opening room, where we mix 20 to 40 bales, again drawing on a minimum of four preblended lots. Therefore the minimum "population" represented in the opening room is 700 bales.

Results. We have nearly cut in half our coefficient of variation of Micronaire at the pickers—dropping it from 4.49% to 2.45%. Our tests have revealed no loss in fiber length.

A limited test shows a 20% reduction in ends down per 1000 spindle hours on a 60s yarn—from 55.6 to 46.0. Clearer waste is 7% less on 30s yarn.

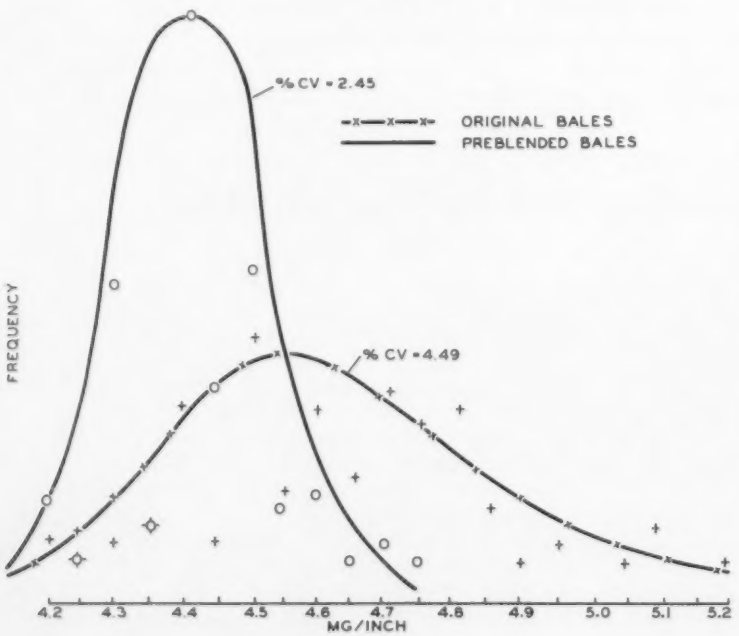
Number of laps rejected is down 13%, and yard-to-yard variation has improved about 4%.

Neppiness has been reduced 12%.

There have been virtually no problems with fluorescent streaks in yarns or with streaky dyeing since we started the preblending program—and these defects had been a constant source of worry to us.

Yarn strength has not been significantly affected on the average, but there has been less fluctuation from week to week.

Coefficient of variation of picker lap Micronaire readings has been halved. Each curve represents 100 laps.



Costs. The total cost of the equipment was $30,000. We do not include any cost for additional floor space, since we were in serious need of additional bale storage space anyway.

Costs of operating are 0.165 cents per pound of cotton processed. We added nothing but direct labor to handle the operation.

Offsetting the blending costs is a saving in spinning from the 20% reduction in ends down.

Other savings, which can not be measured so accurately, include better cleaning, reduction or elimination of redyes, fewer rejects in our own mills, virtual elimination of color problems in our own mills and in customers' plants, and the untold advantage of buying and storing of cotton within a crop year and even more so at a crop change.

The control of comber noils

Mr. Bogdan

■ THE RESULTS of a two-year study of the combing operation, sponsored by ten textile manufacturing companies, were presented by J. F. Bogdan, H. K. C. Woo, and C. H. Pan, of the Textile Research Center, N. C. State College.

The reason for combing is to produce a product which is smoother, more uniform, and lustrous, and which can be spun to finer counts with improved yarn strength. Many mills adjust noil percentages in an attempt to achieve these goals by changes in step gauge setting, the distance between the most forward position of the nipper and the bottom detaching roll.

There are many other factors to be considered in the effort to control comber noils, and the researchers discussed some of the findings coming from their two-year study. The accompanying illustrations are representative of these findings.

Fig. 1. Effect on count-strength product of various lap weights and amount of lap fed per nip, Saco-Lowell comber. Lap preparation: Drawing, lap winder.

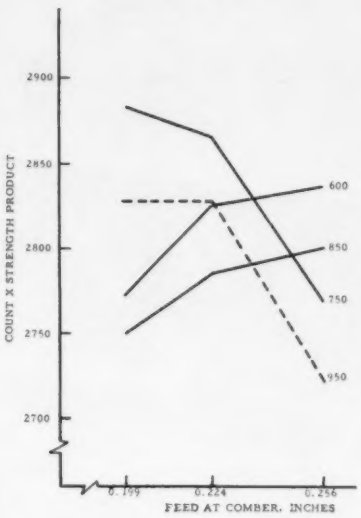


Fig. 2. Effect on count-strength product of various lap weights and amount of lap fed per nip, Saco-Lowell comber. Lap preparation: Sliver lapper, ribbon lapper.

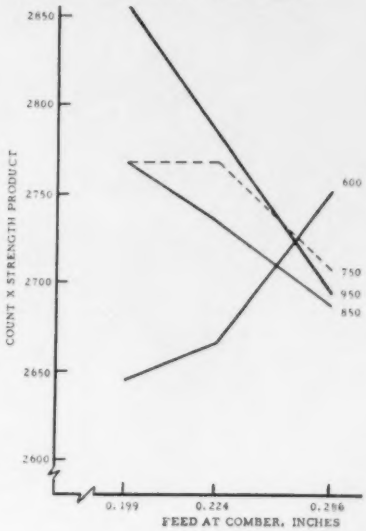


Fig. 3. Idealized demonstration of how light slivers spaced without sufficient contact may result in lack of fiber control at nipper pressure point during the combing cycle.

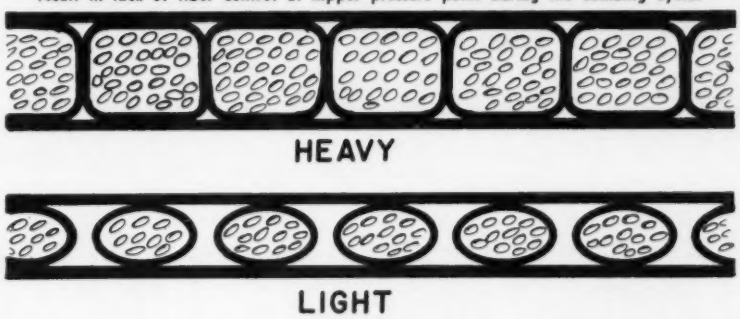


Fig. 4. Effect of different detaching roll timings on comber sliver uniformity; Nasmith comber, individual head; cotton, 1 1/16" M.

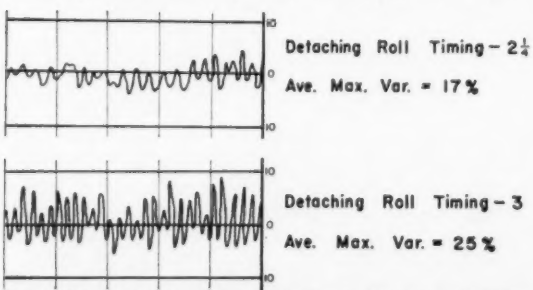


Fig. 5. Effect of different top comb to top detaching roll settings on uniformity; Nasmith comber, individual head; cotton, 1 1/16" M.

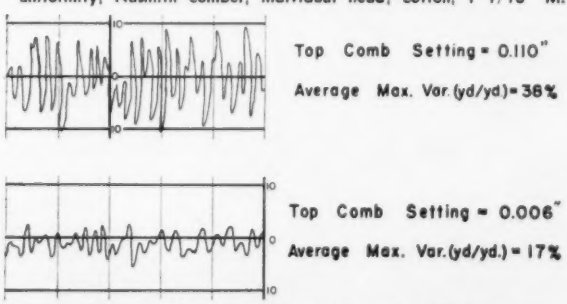
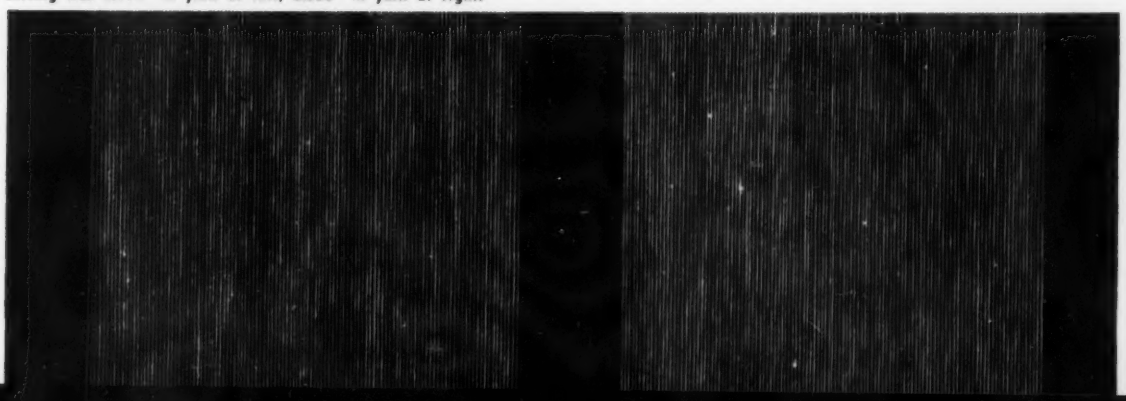
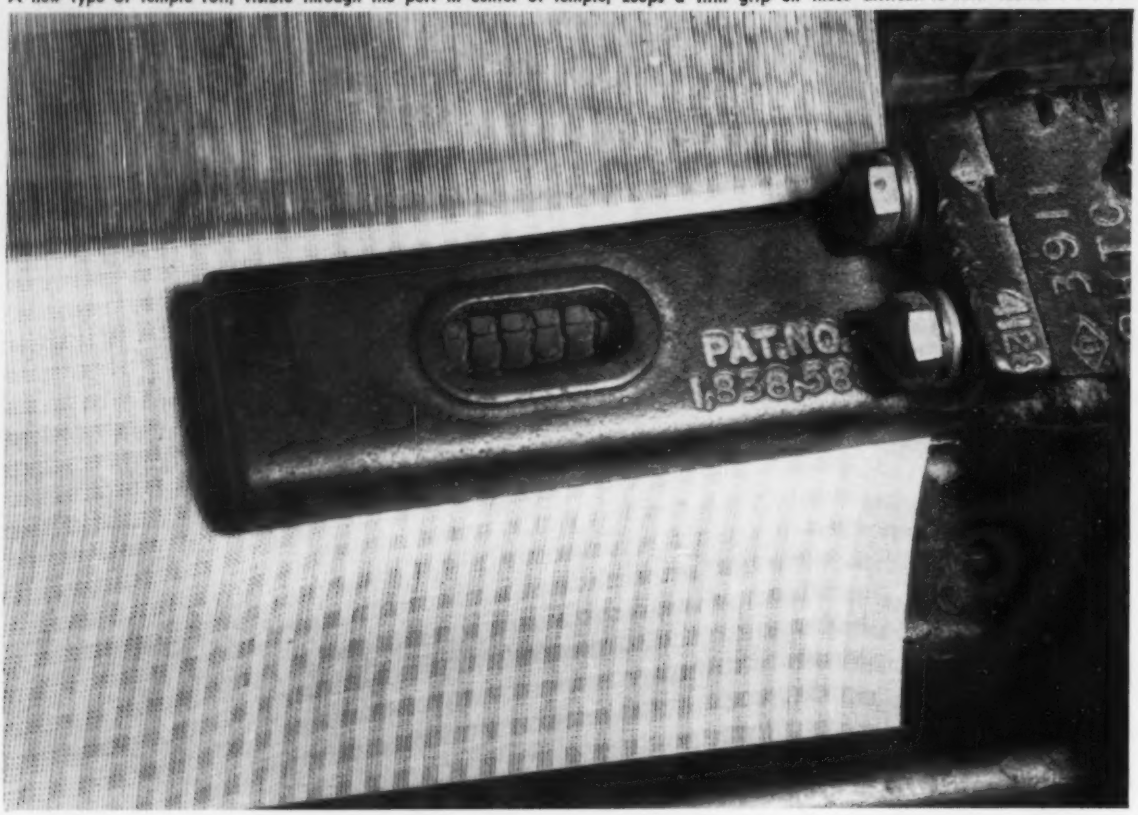


Fig. 6. Effect of different top comb to top detaching roll settings on yarn appearance; Nasmith comber, 1 1/16" SM cotton. Top comb setting was 0.110" in yarn at left, 0.006" in yarn at right.



A new type of temple roll, visible through the port in center of temple, keeps a firm grip on those difficult-to-hold fabrics . . . . .



Temple rolls are little, but . . . . . .

poor fabric quality and loom downtime are often attributable to use of the wrong type

Staff prepared Exclusive

DESPITE their small size, temple rolls play an important role in the weave room. And unless the right type of roll is used, the result is likely to be lost production time, poor fabric quality (from temple marks), or other poor weaving attributable, in part at least, to temples.

Depending on the type of material being made, the average life of a temple roll is from six weeks to three months. Those rolls used with sheer materials may last up to eight months.

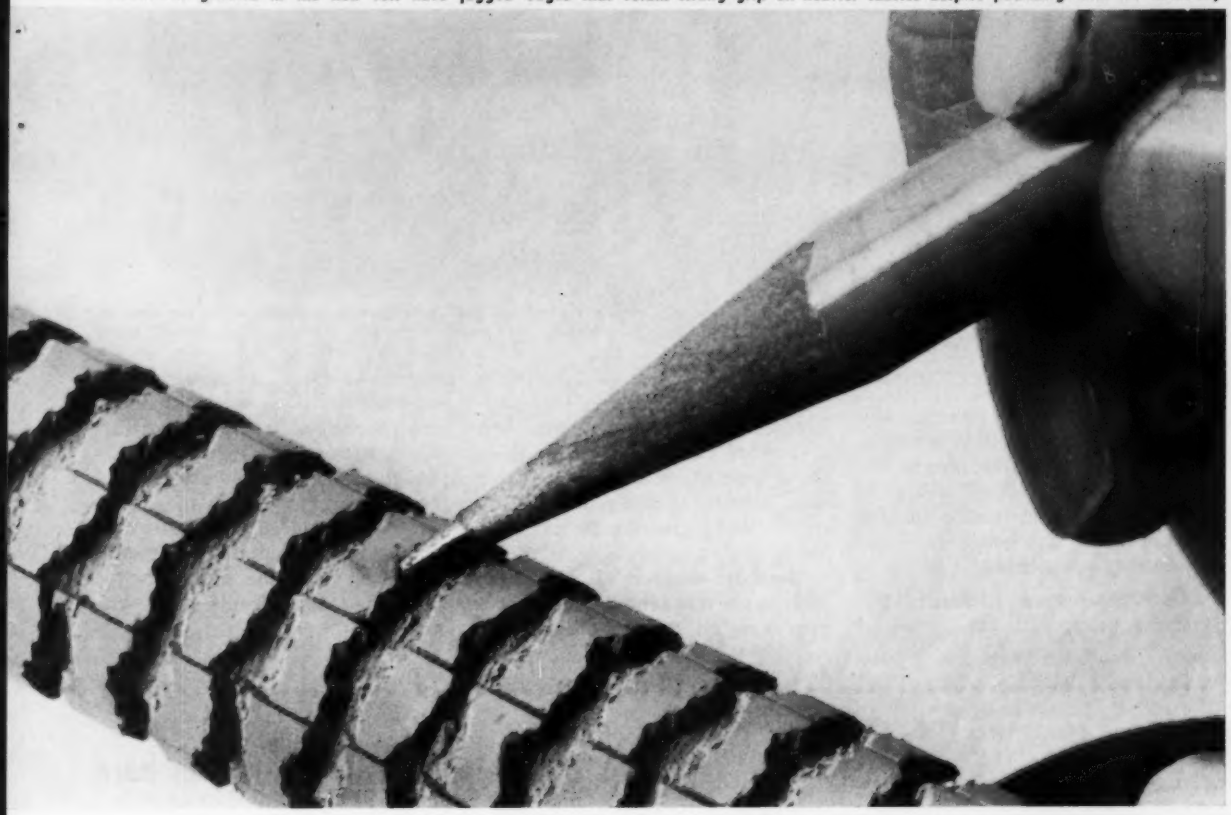
Not many years ago, in many mills one roll was considered as good as another. However, with the advent of finer fabrics, temple roll design became more of a science—manufacturers improved workmanship and tolerances to support the demand for better fabrics.

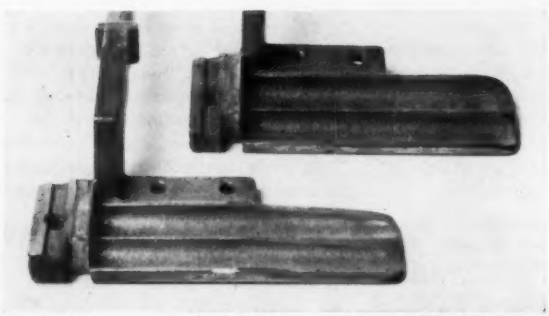
The conventional roll has a smooth spiral groove in its rubber surface. A new type has lengthwise cuts placed at intervals and a spiral groove made jagged with an undercut effect. The roll, though intended primarily for heavier types of cloth, is not applicable to such heavy industrial type fabrics as ducks

Although it was intended primarily for use with heavier constructions, many mills are obtaining excellent results from using the roll on sheer fabrics, but this use is counter to the manufacturer's recommendations. It has an outer surface of a special type of rubber and a core of wood.

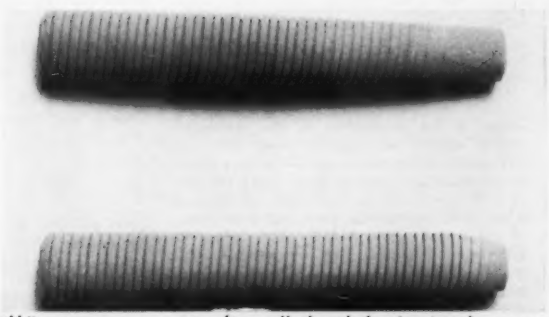
This patented roll possesses a marked ability to hold fabrics to proper width and in line with the reed. One southern plant has found, also, that since its adoption roll life has increased from 25 to 50 per cent on those looms assigned to heavy constructions. A flat 25 per cent increase was reported when the rolls were used

Under-cut grooves in the new roll have jagged edges that retain strong grip on heavier fabrics despite pounding from the loom lay.

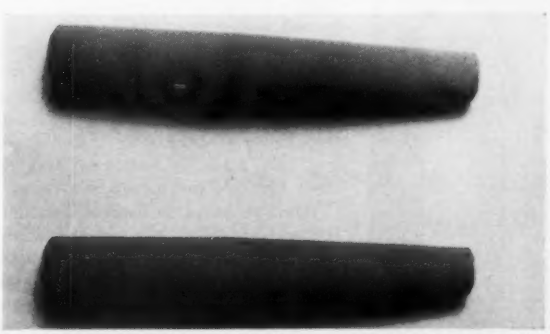




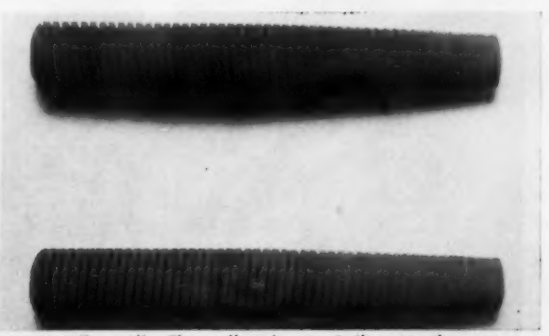
Temple in foreground, filed for use on sheer goods, must be replaced upon return to heavy goods. Tapering the rolls as much as



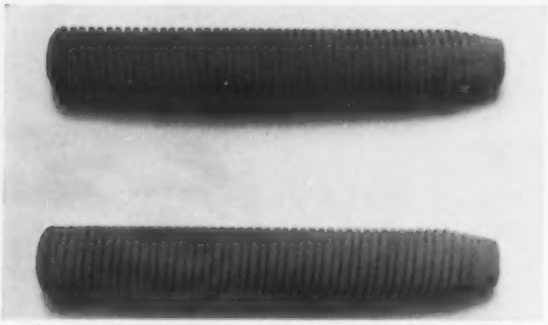
2¼" answers same purpose (top roll above), leaving temple unscarred. Bottom roll has the short taper recommended for heavy goods.



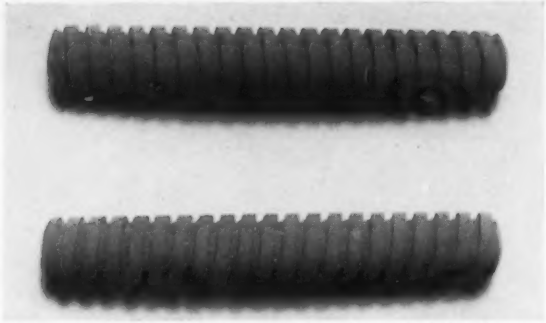
For sheer goods this type of roll is most satisfactory—note the lengthy taper and lack of surface texture. However, the roll holds



exceptionally well. The rolls above, similar to the ones to the left, use spiral grooves to serve the same purpose on sheers.



Another type has spiral grooves without the slender taper and is recommended for holding the heavier grades of cloth. A familiar



roll is the conventional, untapered type above which has been in general use for years. It is still in use on a limited scale.

on sheer spun synthetic fabrics.

The roll design permits the grooves to retain their grip on the fabric even as the lay bumps the temple. The covering seems to yield to the added motion instead of slipping on the goods. No loom alterations are needed.

On open-weave filament synthetic fabrics, roll life increased from 40 to 50 per cent over the roll previously used. In this particular instance, the rolls have been in service about two years. Rolls of different colors are used for easy identification: red rolls are right hand; green rolls are left hand.

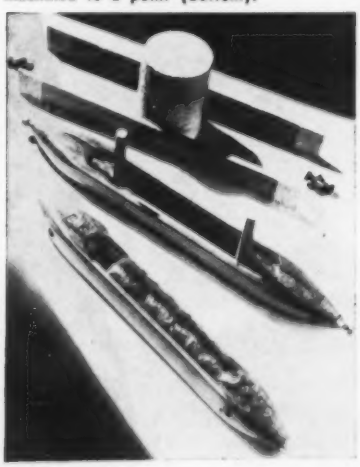
The firm formerly filed temple pods to prevent temple marks from appearing on sheer synthetics (75 denier and finer). In some instances this was done on the heavier constructions above 75 denier. But this practice was expensive, although it solved the problem of the moment, for the temple pods had to be replaced upon return to heavier constructions. Tapered rolls now serve the same purpose and leave the temple pods unchanged.

A laminated plastic shuttle is born

■ TEXTILE mill management and operating executives may find interesting the accompanying photographs which show how a laminated plastic shuttle is made, particularly in view of the fact that an industrial fabric is utilized in the shuttle.

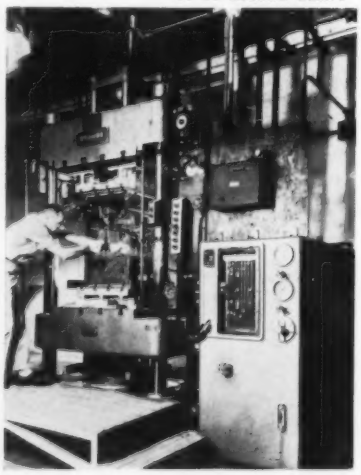
Multiple strips of uni-directional cotton duck, saturated with resin, make up the sides of the shuttle. These are pre-molded into a frame, with a slot down the center for the bobbin.

Stages in the production of the laminated plastic shuttle are shown here. The two side members are made up of multiple strips of uni-directional cotton duck (top) saturated with resin. The pointed ends are formed later, from cylindrical preforms (top also) of macerated cotton duck, also saturated with resin. The steel tips are molded integrally (center) and after molding are machined to a point (bottom).



Final molding of shuttle is carried out, two at a time, in a battery of eight 300-ton semi-automatic transfer presses.

F. J. STOKES CORP.

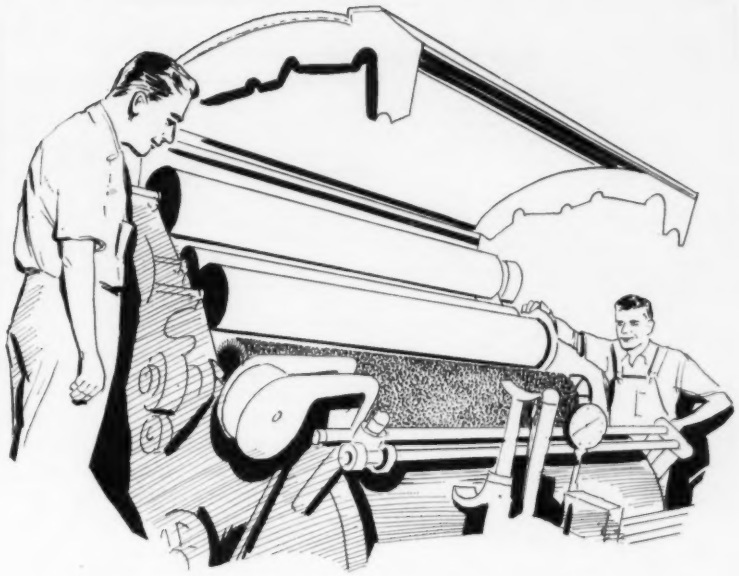


The pointed ends of the shuttle are formed later from a quantity of macerated cotton duck, also saturated with resin. By using macerated material, the compound curves of the heavy ends are more readily molded. The ends are molded around steel tips which are machined to a point after the shuttle is completed.

The macerated material used in the ends of the shuttles is preformed on presses into "plugs," flat discs 3" in diameter and 1½" thick. These "plugs," which contain an exact quantity of material, are pre-heated to molding temperatures in a high-frequency dielectric heating unit and forced under pressure into the mold for the ends. The heat and pressure of the final molding bonds the macerated material to the preformed sides. This completes the two-stage, two-material operation. After molding, the flash is removed and the steel tips are machined to a point.

Final molding is carried out on a battery of eight 300-ton semi-automatic transfer presses. The shuttles are molded in pairs, with the sequence of molding actions controlled by pre-set adjustments of the patented bar controller.

Watch your fancy!



Some tips on the care and operation of fancies

by W. J. Crofts
Exclusive

JUST ONE improperly functioning fancy on a set of cards can seriously impair the quality of the roving produced. So fancies deserve special attention.

How to Check Fancy Action. By sighting along the surface of the cylinder just under the fancy, the carder can determine if the fancy is doing a good job. If this area is dark, he should use a flashlight to illuminate the surface of the cylinder.

If the web is raised too high and has a wind blown appearance on finisher cylinders (as often is the case with lofty stocks) very uneven roving is the result; also thick and thin places from too much fancy action. The remedy is to reduce fancy speed 15 or 20 per cent or until the web is raised evenly to a height of about ¼" above the points of cylinder wire.

The experienced carder can spot an improperly operating fancy when the card is operating simply by glancing at the web on the exposed surfaces of the workers. If the web appears to be thick and heavy or there are thick and pilly streaks, a resetting job or a change of fancies is in order so that the regular fancy can be given a thorough grinding.

At the finisher where the workers are usually run against the points of the wire and carry no stock on their exposed surfaces other methods of detection must be used. By using a flashlight and aiming the beam of light horizontally across the surface of the cylinder at the point between the middle doffer and the finisher cylinder, a fairly accurate reading of conditions can be made where cylinder is not carrying the web and the surface is clear. Streaks on the cylinder surface are detected readily. Marked difference in the shade of the surface indicates that something is wrong with the action of the fancy and calls for immediate stopping of the card for closer inspection.

The stripping crew can be of great help by reporting any cylinders that seem heavily overloaded with strippings and letting the card fixer or overseer personally observe this condition. Usually it is the fancy that is at fault. Sometimes, however, new cylinder wire may be the source of trouble since it holds the stock more tenaciously. Because of this it is wise to install new fancy wire when new clothing is put on the cylinder.

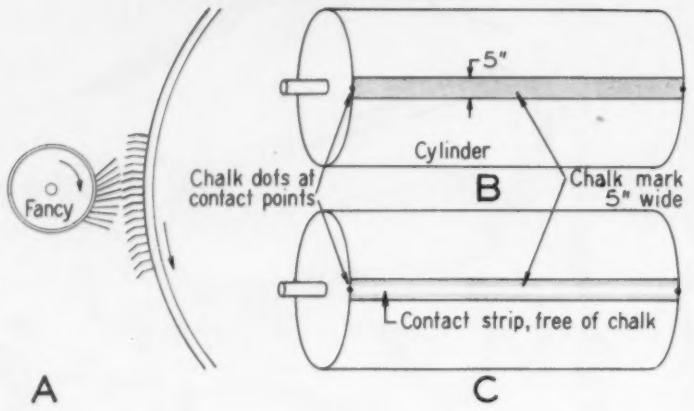
It is not hard to judge how a fancy is working by inspecting the cylinder when card is stopped and just before stripping time. If the surface of strippings in the cylinder looks smooth and the points of the wire are clear halfway down to the knee, the fancy is functioning very well. If the fancy setting is too deep, the points of the cylinder wire will be clear down to or below the knee and there may be streaks of hard-packed, pilly fiber all over the cylinder or the entire surface may look rough and pilly. If the fancy setting is too shallow, the cylinder wire will be loaded right up to the surface and have a rough, pilly appearance.

The finisher fancies need the closest attention, since the malfunctioning of these fancies directly affects the roving.

Setting the Fancy. There are several methods of setting a fancy. A commonly used one is to draw a No. 26 card gauge up through the contact point of the fancy and cylinder and judge the depth of the setting by the hand pressure needed to force the gauge through at this point. There are some carders who depend on this method alone.

A more accurate way is to turn the fancy by hand until the outer edge of fancy wire is exactly in line with the edge of the cylinder wire when the depth of penetration can be easily seen. The points of fancy wire should penetrate about halfway down to the knee

Chalk Method for Setting the Fancy



1. Set fancy to cylinder with No. 32 gauge.
2. Mesh fancy wire into cylinder wire by making several turns of setting nuts on each fancy bracket.
3. Mark cylinder edge with chalk dots at point of contact on each edge as shown in Sketch A.
4. Open poppet bearings and remove fancy from card.
5. Draw chalk straight across cylinder, connecting the contact point dots on each side. Mark should be about 5" wide as shown in Sketch B.
6. Put fancy back into position and rotate it swiftly by hand in its normal direction for a few seconds. Chalk on the cylinder will be brushed off by the fancy wire at the points of contact as shown in Sketch C.
7. Measure with a flexible steel ruler or calipers the width of the blank contact band running across the chalk mark. Check the width of the blank strip all the way across the card. It should be the same width all the way across; otherwise, settings on both sides of the fancy must be equalized before going further.

Because of the variety of stocks used, no general rule can be given for determining the proper width of the contact strip. However, as a basis for tests, a 3/4" wide contact strip might be tried for coarse stock, 1¼" wide for medium stock, and 1¾" wide for very fine stock. The finer the stock, the more deeply must the fancy penetrate the cylinder.

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of cylinder wire.

It must be remembered that as fancy wire wears and gets shorter it becomes stiffer; hence more hand pressure is needed to force a card gauge through the point of setting. So the visual setting described serves as a double check.

The fancy may also be set by the chalk method described in the accompanying box.

Some carders like to make a setting with a gauge and then judge the setting by ear or by the whizzing sound of the fancy wire as it contacts the cylinder.

Roughly, the depth of penetration should be from 3/32 to 4/32 of an inch. The amateur by practice can soon learn to judge correctly the setting by first feeling with a card gauge and then checking the setting by eye.

Causes of Winding. The best of fancies will wind, and streaks of lint and fiber will form on the surface.

Fancies are less prone to wind if the stock is liberally moistened with a good emulsion, as the oil in the emulsion keeps the points of fancy wire slick and smooth.

Bent wires—that is, wires that get bent forward in the form of a hook—are the most common cause of a winding fancy.

An oil can spout is an inexpensive and excellent tool for straightening wire. Simply slip the tip of the spout down over one wire to the depth of the bend in the wire and apply a little pressure. That does it. The wire returns to its original shape.

The top 4/32 of an inch of the fancy wire stays clean from contact with the cylinder, but just below this black grease collects. If allowed to accumulate, the grease will catch fibers and gradually form a compact streak or "horse tail" embedded in the wire. On finisher fancies these streaks may have an adverse effect on roving ends that are directly in line with them.

If these streaks are not carded off, they gradually widen into broad bands that are dangerous to remove with the fancy running at full speed. Hence, an ounce of prevention is worth a pound of cure.

It has been the practice of the writer to appoint two responsible men on each shift to clean or knock this grease out of the fancies at the beginning of every shift. The mill-made tool which they use for this operation is shown in the top sketch on opposite page.

Here is the way the fancy cleaning stick is used: With the card running, two men, one on each side of the card, raise the fancy cover and expose the roll for cleaning. Then each man cleans his half of the fancy by carefully applying the wire on the stick to the wire on the fancy. The men are cautioned to hold the stick at as sharp an angle as possible while guiding it across the surface of the fancy, as this keeps the drag to a minimum. Should the stick be held lengthwise of the fancy, the drag created would probably jerk the stick into the card with disastrous results.

As the grease comes off the fancy wire, it stains a number of yards of roving, so finisher tenders must watch for this and return the grease-specked roving to the feeder for reprocessing.

This cleaning procedure may seem to be quite hazardous, but if the men are careful in applying the stick to the fancy, there is little danger of an accident.

Keeping the fancy wire clean minimizes the objectionable draft created by the high speed of this roll.

The Fancy Stripper. The best location for a fancy stripper is at the top of the fancy (as shown in an accompanying sketch) where it can be reached handily with the vacuum stripping spout.

If it is set to the fancy and cylinder with a No. 26 card gauge, this roll is an excellent safeguard against streaks of fibers forming on the fancy. However, it will not stop the fancy winding in streaks if there are hook bent wires.

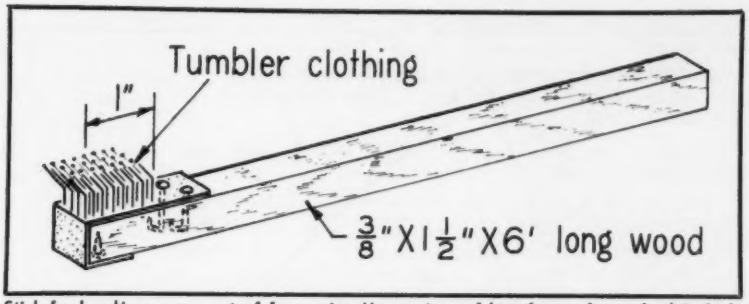
Regular worker clothing is best for this roll, as worker wire collects stripping lint; and when it is vacuum stripped lint and grease come out readily. While high bent wire does not require stripping so often, it gradually fills up with grease that is very difficult to remove, even by the hand stripping method.

A stripper can be mounted above the fancy simply by installing stripper posts and poppets on the cylinder arches. Use arch castings exactly like those on the angle stripper posts in order to get a horizontal adjustment for setting the stripper to the fancy.

Importance of the Draft Roll. It is true that the draft or evener roll under the fancy breaks the air current created by the high speed of the roll, but its most important function is to make the fancy raise the web to a uniform height in the wire over the entire surface of the cylinder. On finisher cylinders when the web is higher in some areas than others, producing a streaky appearance on the cylinder surface, the quality of the roving ends is adversely affected. This condition is frequently encountered with lofty blends.

The draft roll should be a smooth, unclothed roll 2½" or 3" in diameter, set close enough to the fancy to permit the tips of the fancy wire to keep its surface free of grease and set loosely to the cylinder with a No. 20 card gauge to enable it to perform its function of leveling off high places in the web (refer to an accompanying sketch showing this roll).

Draft rolls can be installed on old model cards. But before going to a lot of trouble, check the under side of the fancy shelf for holes and slots to accommodate the castings—the roll might have been discarded by a predecessor. If the required castings cannot be located, order them from the card builder, but be sure to state the year the card was built and width of the machine.



Stick for knocking grease out of fancy wire. Use a piece of knot-free, soft wood 3/8" thick, 1½" wide, and 6' long (for a 72" card). Remove half of the wire from a piece of tumbler clothing and fasten it to the stick with nails as shown.

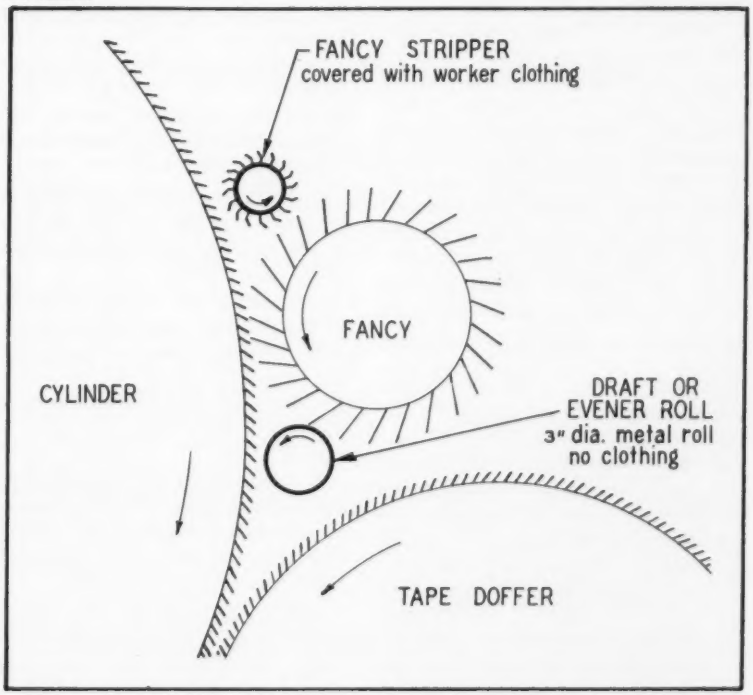
Fancy Cover. Covers for fancies are a must with the vacuum traverse pipes extending across the top of the card to gather lint and flyings from the fancy. Lint dropping from this equipment into the card causes lumps in the roving and also is a safety hazard.

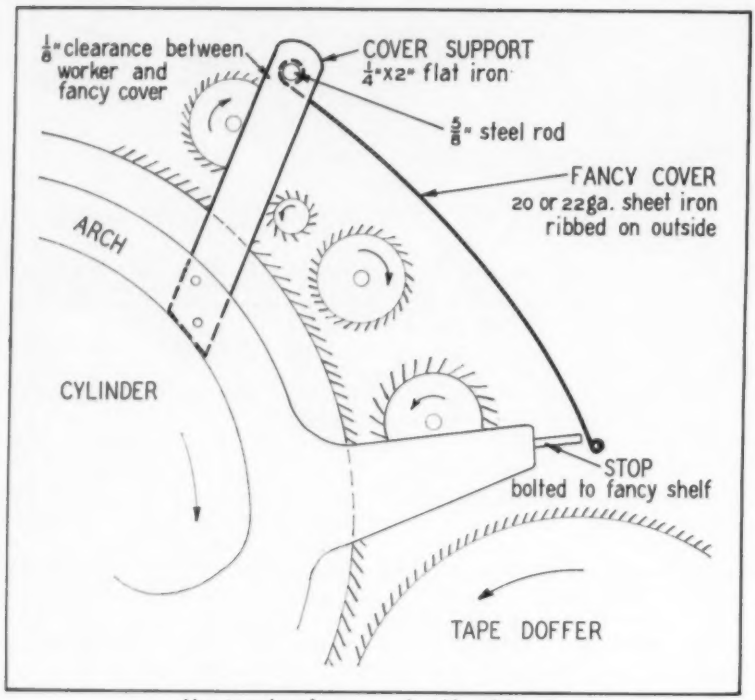
Good practical covers can be made in the mill machine shop or by a local tinsmith. The sketch on page 84 shows a cover suitable for older model cards not so equipped.

The contour of the cover should be as straight as possible with no sharp curves to form a dead air pocket where a mass of lint will collect to cause trouble. Allow plenty of room; in other words, keep the cover as far away from the fancy as possible to permit the strong draft of air to dissipate. Also the under side of the cover will not become coated with grease and lint so quickly since it is out of range of the full force of the air current.

Ribbed on the outside, these covers present a smooth inside surface to the fancy with no

The fancy stripper and draft or evener roll should be located as shown here, according to the author.





How to make a fancy cover for old model cards.

hinged doors to catch lint.

At the tape doffer the cover can be raised for cleaning the fancy since it is pivoted at the top by the rod that extends beyond the card arches and through holes in flat irons bolted to the arches.

With a 30" diameter middle doffer there is not as much room as might be desired. To obtain more room changing the position of the vacuum traverse pipes may be necessary. Since there is not enough room to raise the cover in such close quarters, the top and pivoting point should be at the top of the first worker over the fancy. This will permit stripping the worker without removing the cover.

Fancy Speeds. To figure the surface speed of a fancy with any degree of accuracy the exact diameter of the fancy over the tips of the wire should be determined by measurement, as the long wire wears down with use and the diameter of the roll decreases.

The following method is very reliable for quickly determining the outside diameter of a fancy:

1. Measure in inches the distance from the surface of the fancy shaft to the tips of the wire.

2. Double the above measurement.

3. Add to the product in Step 2 the diameter of the fancy shaft (in inches). The result is the outside diameter of the fancy over the wire.

How much the fancy is leading the cylinder may then be quickly determined without having to make a lengthy calculation. Here is the way it is done:

4. Multiply outside diameter of the fancy over the wire (in inches) by the speed of the fancy in revolutions per minute.

5. Multiply the outside diameter of the cylinder over the wire (in inches) by the speed of the cylinder (rpm).

6. Subtract the product obtained in Step 5 from that obtained in Step 4.

7. Divide the result of Step 6 by the product of Step 5. The answer (in per cent) indicates how much the surface speed of the fancy exceeds that of the cylinder.

After more than 30 years of experience as a woolen carder, the writer has found that the fancy should lead the cylinder as follows when processing the stocks indicated:

Coarse, lofty blends	25 to 30%
Medium blends	35 to 40%
Fine blends (60s - 64s)	50 to 55%
Very fine blends (64s to 70s)	60 to 65%

Fancy Clothing. The clothing most generally used on fancies has 1½" long straight teeth of No. 28 wire set into a leather foundation 3 - 3 - 3. This open set fancy wire is suitable for nearly all stocks used in making yarns on the woolen system.

In spite of great care on the part of card clothing manufacturers in selecting leather, it is almost impossible to put together a leather foundation that is perfectly uniform in texture. Hence, there will be some places where leather is firm with softer leather in between.

If the strand of clothing is wound onto the roll with too much tension, the softer leather will stretch, changing the pitch of the wire. The result is a very uneven surface, the high and low places giving the appearance that some of the wire is shorter than the specified length. Tension of 40 to 50 pounds is ample.

A double leather foundation is more uniform, and some carders insist on having this type.

Since leather will stretch, fancy clothing may become loose and creep to one end of the roll, forming a blister or knuckle which if not detected may cause serious trouble. Wood fancies give very little trouble in this respect, since the base of the wire settles down into the soft wood and reduces the tendency of the foundation to creep.

Smooth metal rolls are the worst offenders; and with the wider modern cards and a much longer strand of clothing, this stretching and creeping of the foundation is becoming a serious problem.

Scratching or scoring the metal surface lengthwise of the roll with a coarse file or emery cloth helps to check creeping as the base of the fancy wire sets into and grips the scored marks. This must be done by hand, and the stroking with file or emery must always be lengthwise of the roll.

Painting or shellacking the sur-

face of the fancy and then winding on the clothing before the paint or shellac has dried is another method. However, a combination of the two—scoring the metal surface and then painting—is much better.

Recommends Grinding Fancies. If a systematic program of fancy grinding is employed to keep all fancies in top working order, not only will the quality of the roving be improved, but in most cases the stripping interval can be lengthened and consequently production increased.

If cards are operating on three shifts, the fancy grinding interval should be from four to six weeks. However, the length of the interval is governed by the nature of the stock being processed, as fine and soft wools exert less wearing action than coarse blends. But a more significant factor is the emulsion, since an oily emulsion lubricates the wire and reduces wear on the points. Abrasion is greatly increased when processing blends in which only one per cent or less of oil may be used.

For a thorough job fancies require at least three or four hours of grinding, because the long and limber wire does not stand up to the emery wheel like the shorter worker or cylinder wire. Before grinding it is wise to straighten all bent wires. An oil can spout may be used for this as mentioned previously.

A solid wheel of coarse emery is best for fancy grinding, as the conventional glued-on emery does not last long. Also, a solid emery wheel produces on the wire a flat, blunt point which is desirable for fancy wire. The purpose of fancy grinding, of course, is to grind off the needle points and also to level off the ridges and grooves that form on the surface from abrasion—not to produce a finer, sharper point.

There should be two spare fancies for each card of a different make and/or width, so that plenty of time can be taken to grind and recondition the regular fancies. Replacement of fancies should be made at stripping time to minimize machine downtime.

After grinding, since the lifting power of the wire is at its peak just as when it is new, it may be necessary to reduce the surface speed of the fancy from 10 to 30 per cent to avoid lifting the web too high. Another advantage of this is that the lower speed reduces the rate at which the blunted points are worn away. After two or three weeks of operation on a three-shift basis, when the points have worn slightly, it may be necessary to increase the speed of the fancy.

Will the Fancy be Replaced? There has been little change in the fancy since the first one was installed, and certainly there has been no change in principle of operation since it still is a brush that brushes the embedded web up out of the cylinder wire. True the tempered steel wire in use today is a vast improvement over the soft iron wire of olden days.

Will there always be a fancy? This is a matter for conjecture, and in this age of scientific discoveries anything can happen.

Is it not possible that a long slotted tube placed across the cylinder and a mild suction similar to vacuum stripping might be successful in raising the web without drawing the fibers into the tube?

Then there is the possibility of creating an electrostatic field close to the cylinder at the position now occupied by the fancy. Think of the way a person's hair stands on end when he passes bareheaded under a huge overhead belt. Yes, the power of static electricity may some day replace the fancy.

Shirley Analyzer proved nearly as accurate for lint content as trash

■ RESULTS of an investigation of the measuring accuracy of the Shirley Analyzer show that lint content of raw cotton, as well as the trash content, can be determined with rather good accuracy. The accuracy in trash determinations is higher than in lint determinations, the research team explained in the report, but this is to be expected because the machine was designed specifically for the determination of trash content.

Some years ago The Swedish Association of Cotton Manufacturers suggested that the International Federation of Cotton and Allied Textile Industries investigate the possibility of using Shirley Analyzer testing as a means of determining objectively the lint content of raw cotton. It was reasoned that a positive result of such an investigation would imply that lint content according to Shirley Analyzer tests could be included in commercial specifications as a complement to specification by grade.

At the proposal of a technical committee appointed by the International Federation, the Swedish Institute for Textile Research was later asked to carry out the investigation.

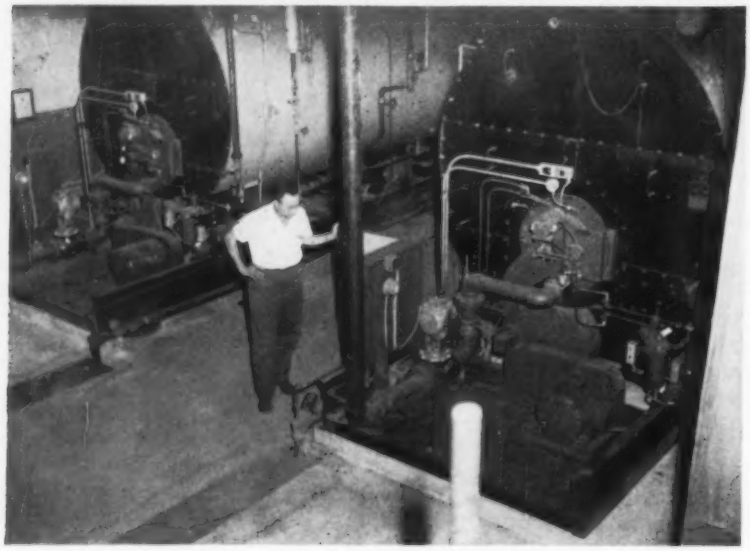
The scope of the project was to evaluate the accuracy of lint and trash content in raw cotton as determined by the machine.

It was concluded that besides the short period variation in test results, there is a long period variation which can be neglected only in comparisons between test series carried out during the same short test period (usually one day or a few successive days).

Finally, several of the participating laboratories were able to keep the testing variation low compared with the cotton variation in normal shipments. This suggests, it was explained, that determinations of lint content using the Shirley Analyzer would be a helpful tool in the cotton trade.

A complete report of the results of this investigation was published in the March, 1959, issue of the "International Review of Cotton and Allied Textile Industries."

New boilers operate at about 75% efficiency, make about 10,500 pounds of steam per hour.



New boilers save $$$

When Clinton Cotton Mills stopped generating power, the old boilers were too big for efficient operation

Staff prepared

Exclusive

A RISING power demand made it impractical for Clinton Cotton Mills, Clinton, S. C., to generate its own power. Capacity was insufficient, and management decided to buy electric power on contract.

This change left three coal-fired boilers suitable for operation at 400 psi and 725 F. Two boilers each had capacities of 32,000 pounds of steam per hour, and one had capacity for 75,000 pounds. These boilers were too big to efficiently supply the greatly reduced steam demand, which was for processing and heating only, despite its being reduced to 125 psi operating pressure.

Management decided to replace the old boilers, so two package-type boilers were installed, each rated at 300 hp. The new boilers are gas and oil fired; they operate on gas, with interruption agreement, depending upon local demand.

Less overhead is required to operate the new boilers, which perform at 75 per cent efficiency. Operating costs at 70 per cent efficiency are sufficient to realize a substantial annual saving on overhead, according to officials at Clinton.

Gas is used for fuel 73 per cent of the time; oil the rest of the time.

Each new boiler makes about 10,500 pounds of steam per hour at 212 F, up to 150 psi maximum. The new boilers are automatic and only require periodic checks on an hourly basis to see that pressure and water level are satisfactorily within safe range.

About 30 minutes each shift is sufficient time for blowdown.

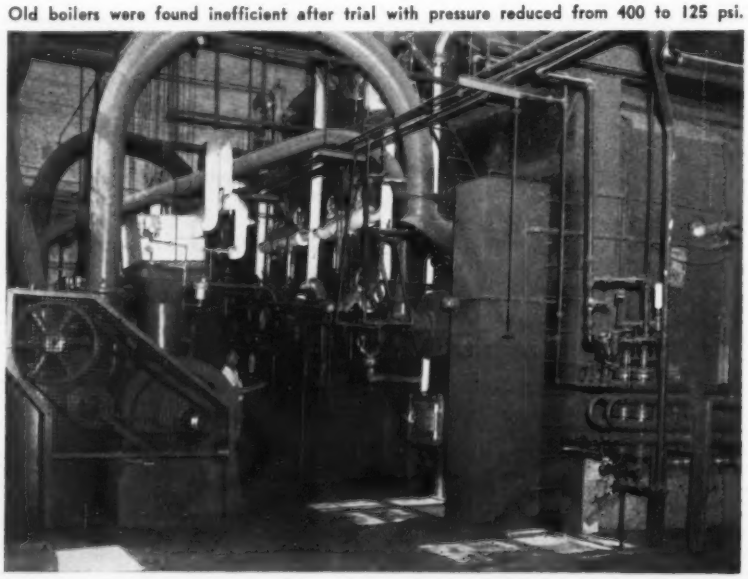
Only treated water is used in the new boilers. Chemicals are fed into the feed water pump, and mill personnel check the water daily to be sure of correct treatment. The supplier of the water treatment chemical makes monthly checks. The filter plant operator makes water checks for the mill.

Better pressure control of the new boiler provides better drying at the slashers and more uniform heat on slasher cans with less pressure variation. There are two seven-foot cans and one five-foot can on each of four slashers.

Total heating load now required, less 10 per cent for losses, is 17,685,000 Btu per hour (5,000 pounds per hour, summer; and 10,000 pounds per hour, winter).

After removal of old boilers and old concrete footings and floor, a new floor and footings for the new boilers were poured. Installation of the new boilers was accomplished with a minimum of trouble and inconvenience.

Old boilers were found inefficient after trial with pressure reduced from 400 to 125 psi.



Jim Gordon, right, explains to Tom Creswell, assistant superintendent, the importance of grinding his rolls and "dumping" them properly to prevent cracking of cover at roll ends.

Asa Fisk ruins two or three suits a year by being put on the spot—it's part of the job.

Put sales engineers on the spot

These tips on choosing, using, and maintaining rolls show how they can help

by James T. Gordon
Stowe-Woodward, Inc.

Exclusive

EVERY MILL that's called on by a sales engineer has a chance to add a technical man to its staff—at no extra cost. Some take full advantage of the chance, some don't.

With new developments in textile machinery, accessories, and chemicals coming one on the heels of another, it is more than most mills can do to keep up with the latest. Here's a time to consult the sales engineer.

The sales engineer is a trained professional man—a consultant you can call on without fee to help with the problems that come up in even the best run mills. Put him to work; use his knowledge.

Here are some examples of the information you can get from the sales engineer, using textile rolls as an example.

A For-Instance. The chief engineer of a finishing plant recently asked for information about a new roll made available to the industry not too long ago. He got complete details of the roll—pinpointed to his specific interests—and as a bonus got some useful tips on how to choose, use, and care for his rolls:

Shady dyeing at the pad can sometimes be minimized by choosing a top roll a little softer than usual. This permits a longer contact in the nip and will allow some dyes to disperse themselves more evenly across the goods.

Most dye pad rolls should be re-covered when they are worn to 5/16" thick. After that the rubber cover may start to give a wavy or "shoreline" effect. Result—uneven dyeing.

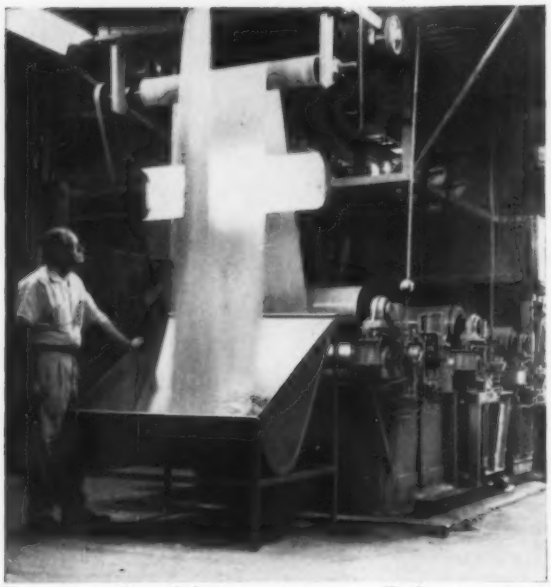
Dyers are well aware that too much or too little crown in a roll means short roll life. Feel each roll from time to time, and if it's getting hot—watch out!

Never use any more pressure on a roll than necessary; the greater the pressure the shorter the life.

Check for hot bearings and poor alignment. A hot journal will transmit heat to the roll, and sooner or later will cause a cracked rubber end or loose cover on the core.

When you grind your rolls, dump (bevel) them for about 1½" from each end, and about 1/16" deep, and put a slight radius on the ends. Go farther if you wish, but leave a safety factor for the working area. This will help to prevent cracking of the cover at the roll ends when pressure is applied.

When you plan a change in processing conditions—new chemicals or a new formula, for instance—check with your sales en-



This superintendent of dyeing wants squeeze rolls that are resistant to selvage marks, so that too frequent grinding is unnecessary.

This textile machine shop is well set up for grinding rubber-covered slasher rolls. A useful tip: Don't be afraid to use the talc bag!

gineer to see what effect to expect on your rolls. Some of the new finishes can chew up a rubber roll in no time, but have no effect on other materials.

Roll Tips for a Slasher Man. An overseer of slashing got these tips from a roll sales engineer:

We recommend that the dresser roll be covered with 1" of rubber. To give proper nip and cushion for dressing cotton yarns, use a density of 45-50 Durometer, Shore "A." For synthetics, use a slightly higher density—55-60 Durometer, Shore "A."

To prevent contamination due to rust on the ends of the core, we recommend that the ends be covered.

Good operation demands that the metal bottom roll have a smooth surface, free of pits and grooves, and be reground straight-faced.

The top squeeze roll should be of the same face length as the bottom roll. If either roll overhangs, there'll be too much pressure on the rubber roll. Even-length rolls prevent build-up of size and eliminate slinging of size.

If you have an older slasher without roll-pressure controls, we recommend that you get them. Eliminate any chance of too much pressure causing improperly dressed yarn, flattened yarn, or incorrect amount of size.

Maintenance for Slasher Rolls. Most rubber-covered size box rolls need periodic grinding to remove the oxidation that builds up on the roll cover. We suggest that you grind these rolls every six months. However, to suit your production convenience, it may be preferable to grind every four months, or even every nine months with some rolls.

There are some signs that tell when a roll needs grinding. The density of the cover may change. Or you may notice a crazing pattern, which looks like dried, cracked mud. This is generally noticed on the roll ends outside of the yarn-contact surface.

You don't waste rubber by periodic grinding. Quite the opposite. It insures longer life from slasher rolls, because it brings the rubber covers back to life and closer to their original density. If you don't grind, the oxidation grows deeper and deeper, the roll cover loses its resiliency, and is a complete loss.

Grinding Slasher Rolls. The "Golden Rule of Good Grinding" is "Don't Hurry!" Manufacturers of rubber rolls are set up for production grinding. That is their business. Leave it to them. Most textile mill shops are equipped with portable grinders, or their own grinding wheel attachments rigged up for the engine lathe. So take it easy.

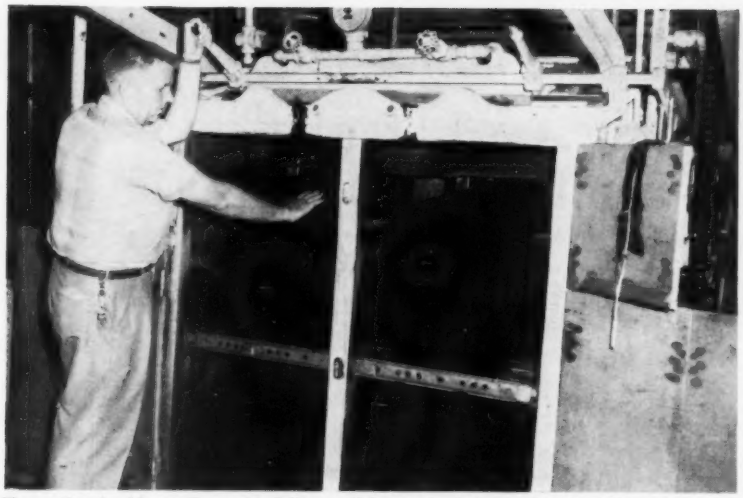
The ideal shop set-up for grinding slasher rolls is a conventional stand mounted on the carriage of the lathe. Use at least a 2-hp motor, or better still a 3-hp motor. You can fasten the grinding wheel directly to the motor shaft.

A 10" to 12" diameter wheel with a 1½" face, 36-grit, is best. Either a vitrified or a Resinoid wheel is suitable. A motor speed of 1750 rpm does very well, but the wheel speed should not exceed the manufacturer's recommendations. A dust collector is useful and helps to keep the roll cooler.

Some mills may use a grinding wheel of the same number grit that they use for grinding cots, but they are doing the job the hard way and won't get a properly ground roll.

Do your grinding job with a well-dressed wheel, dressed with a diamond when it is mounted on the lathe. Have the face straight; knock the corners off the wheel, ever so lightly, with a piece of 150-grit sandpaper; and clean the loose particles of grit off the face of the wheel.

If the roll cover has deep cuts



The sectional rubber rolls on this fulling mill being checked by Glen McCallum are ground every six months. If ground in place, the interval between shop grindings would be a year.

in it, you may want to save time by taking a skinning cut off the face of the roll with a properly ground tool. Then for the rough grind, proceed as follows:

Be sure your roll is cold—it grinds better—and have talc powder or soapstone on hand. Don't be afraid to use plenty of it. Dust it on the roll from a loosely woven cloth sack as you grind. It will lubricate the work and help to keep the roll surface cool.

Have the *roll* speed (*not* chuck speed) at 70 to 80 rpm. The speed can be easily checked by counting the revolutions of a chalk mark on the roll.

Make sure that the wheel is grinding on the center of the roll. The rubber roll should be turning clockwise, and the grinding wheel counterclockwise.

Start with a light cut, about 0.003″ to 0.006″, and advance the depth of the cut until you see that you are getting the best surface without overheating or gouging the rubber. If the roll overheats, try a slower roll speed.

For a 1″ face wheel, the speed of traverse should be about 1⅝″ in 15 seconds. With a wheel of 1½″ face (which we recommend), use a traverse speed of 2″ in 15 seconds.

Grind the roll from both directions, right and left.

For finishing, maintain the roll speed but reduce the traverse speed by about half, and do not take a cut of more than 0.002″ or 0.003″.

When you are finishing up with a light cut, let the wheel run out at the end of the roll before advancing the feed. Don't advance the wheel when it is part way across the roll.

Be sure to remove all traces of cracks or checking in the cover. If they're not removed, the cover will soon check when you put it back into service.

If the roll is not perfectly smooth when it's finished, and rough marks are left on the face, it will wear in this pattern and will not dress the yarn properly.

To remove wheel marks and get a high polish, use a standard-size piece of 150-grit sandpaper; speed up the roll and polish.

Fulling Mill Rolls. The sectional rubber rolls found in fulling mills, washers, squeezers, and some other applications should usually be ground every six months—more often under unusually severe conditions.

Some maintenance men prefer to grind periodically while the rolls are in place in the machine. This is done by simply attaching a piece of sandpaper to a board and smoothing the face of the rolls as they revolve. Needless to say, every safety rule must be strictly observed when this method is used.

When in-place grinding is the practice, the rolls should be removed from the machine once a year for a complete grinding in the shop. This gives the roll a new working surface, helps to maintain its original density, assures even nip, and makes for performance as good as that of a factory-new roll.

Narrow fabrics makers met in Southern Pines

■ THE SPRING business and social meeting of the Narrow Fabrics Institute, Inc., was held at the Mid-Pines Club, Southern Pines, N. C., April 26-28, 1959.

Subjects considered by the board included the following, among others:

Depreciation—It was decided to again submit a written appeal to the Treasury Department to revise depreciation schedules as now contained in Treasury Bulletin F.

Exports—It was decided to probe this subject beyond the meeting discussion, by a survey of the membership to determine the areas of existing and potential export business.

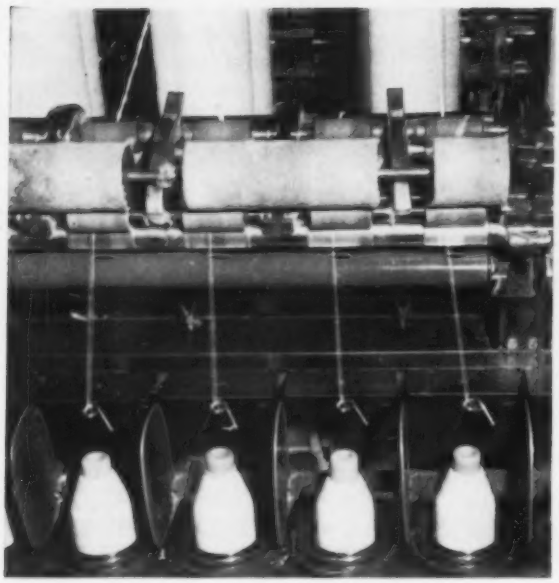
Government Statistics—It was decided to initiate action, through the Institute Statistics Committee, to bring about clarification and uniformity in classifications covering narrow fabrics products, used by different Government agencies to collect various statistics.

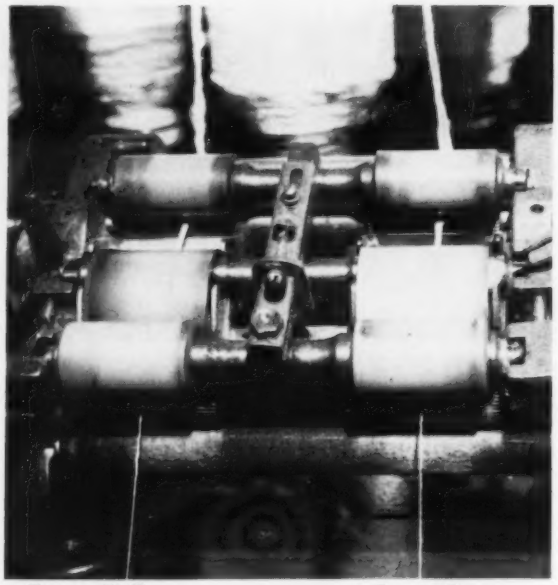
Product sections considered matters pertaining to commercial standards and federal specifications. Subjects of special interest to individual product sections also were discussed.

Garment Closures—Because narrow fabrics producers are leading suppliers of "tape" for zippers and other types of closures, the Tape Section had an informal discussion of the "Velcro" closure, and its applications.

Automobile Safety Seat Belts—The Institute, through its Webbing Section, is continuing financial support of various programs to publicize the fact that automobile safety seat belts do reduce deaths and minimize injuries. Reports at the meeting indicated a growing interest in these efforts on the part of such organizations as the Public Health Service, American Medical Association, National Safety Council, etc.

GEORGIA SPINNERS DISCUSS





vacuum scavengers . . . double apron drafting

Staff report

TWO QUESTIONS on the operation of spinning frames equipped with vacuum end collectors—how to control scavenger waste and how to prevent top roll chokes—were asked by Spinning Discussion Leader Robert O. Simmons of Pepperell Mfg. Co., Lindale, Ga., during the recent meeting of the Textile Operating Executives of Georgia*.

SCAVENGER WASTE MADE WITH VACUUM END COLLECTORS

Mill	Yarn No.	Ends down per 1000 spindle hours	Waste made %
B	21s - 31s	35	2.00 - 2.25
C	4s - 42s	25 - 40	2.65
F	48.5s	28	1.50
J	31s warp 41s fill	40 45 - 50	2.40
Q	6s - 20s Cotton & rayon	——	1.30
R	3s - 26s		.94
	26s filling (dyed raw stock)	22.8	.63
S	8s - 30s	45	1.30
T	3.5s - 20s	35 - 40	——
U	3s - 30s	23 - 65	1.95
V	19.5s - 31s	12 - 15	1.34

Control of Vacuum System Scavenger Waste. The method used in a fine yarn (48.5s) mill proved to be especially interesting to superintendents and spinning overseers of mills with this equipment.

In that 15,000-spindle mill the waste made on each spinner's job is weighed at the end of each shift and the amount posted in the department for all operatives to see. There the average number of ends down per 1000 spindle hours is 28; the amount of waste produced, 1.5 per cent.

Collector box waste is weighed at the end of each shift in another mill, but results are not posted on the departmental bulletin board. Instead, supervisors use the information as a basis for verbally pointing out to the operatives concerned those jobs which are poorest running or poorest attended.

As would be expected, ends

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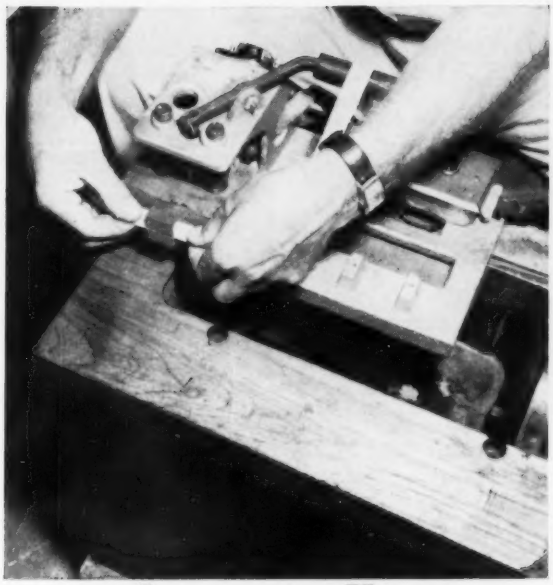


...nylon spindle tapes .....frame cleaners

down tests and periodic waste weight checks are the commonly used control measures.

"We make one ends down check on each shift," one operating executive reported, "and if the number is too high, we follow up with the spinners."

Readers may find it helpful to compare results being obtained in their own mills with those of Georgia mills in the accompanying table.

How Top Roll Chokes Are Prevented. Following are some of the things these mill men suggested to reduce the number of top roll chokes on frames equipped with vacuum scavenger systems:

1. Reduce relative humidity. Two mills have done this. In one where LM and SLM cotton is processed, humidity was lowered 20 per cent. Spokesmen for two other mills suggested close control of temperature and humidity.

2. Install antifriction rolls. One operating executive said: "We have very little lapping on our frames with antifriction top and bottom rolls. On our frames where we oil rolls we have quite a bit of lapping."

3. Keep top rolls clean and in good condition.

4. Use the recently developed lap-resistant cots. Fewer chokes were the result when one mill installed softer cots with Durometer hardness rating as low as 65, but on solid arbor rolls these would grind out when a lap would get on one of the bosses.

5. Use corrugated rubber covered revolving top clearers.

Preferred Build for Yarns to be Spooled. For yarns that are to be processed on Barber-Colman automatic spoolers, the combination wind gives best results, said 11 of the 19 mill spokesmen who answered this question. Six prefer the warp build; two, filling wind.

Of special interest to the group was the following report from Mill M where 20s to 30s yarns were processed on C-type spoolers with balloon breakers:

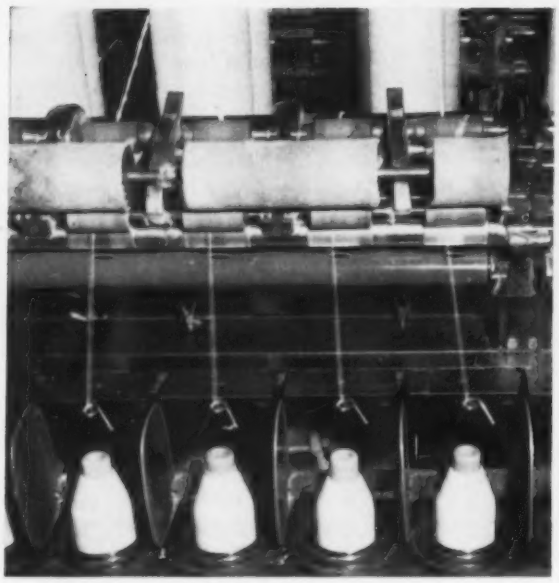
"High twist yarns (4.00 twist multiple or greater) will run more satisfactorily on combination wind at higher speeds (up to maximum of 1,200 ypm). Yarns with less than 4.00 twist multiple will be increasingly more difficult to spool from combination wind as the twist multiple is decreased and the yarn gets coarser."

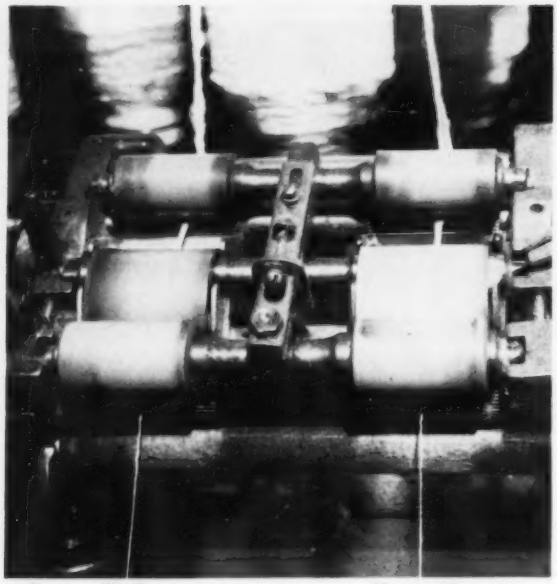
Interest in Filling Wind Mounting. Only one mill reported exclusive use of the filling build for yarns to be processed on automatic spoolers. Yarns produced there are 48.5s; stroke is 2 7/16"; ring size, 2"; spooler speed, 1000 ypm; balloon breakers are not used. However, spokesmen for nine mills said they either are presently experimenting with a new type filling wind cam which is designed for yarns that are to be spooled or have already tried it.

Especially interesting to the group was the following report from Mill V:

"We have had best results on Barber-Colman spooling using a six-point filling cam. This is on a frame with 2¼" rings running a 10⅜" long warp bobbin. Our spoolers wind at a rate of 1,240 ypm. Yarn counts are 19.50s warp, 23.00s warp, 31.00s warp, and 23s filling." *(Continued next page)*

GEORGIA SPINNERS DISCUSS





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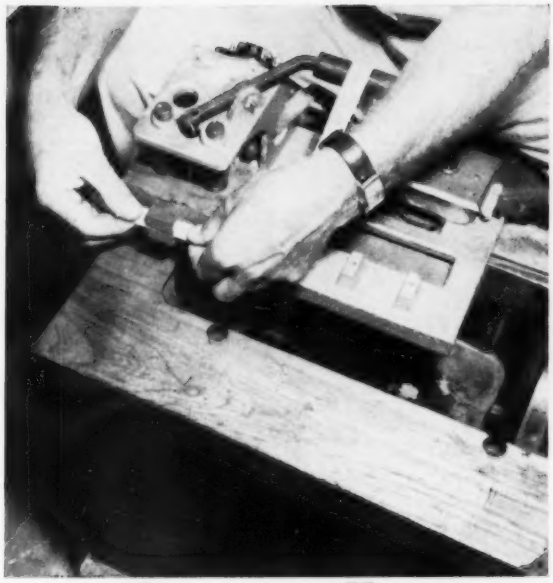

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2. Install antifriction rolls. One operating executive said: "We have very little lapping on our frames with antifriction top and bottom rolls. On our frames where we oil rolls we have quite a bit of lapping."

3. Keep top rolls clean and in good condition.

4. Use the recently developed lap-resistant cots. Fewer chokes were the result when one mill installed softer cots with Durometer hardness rating as low as 65, but on solid arbor rolls these would grind out when a lap would get on one of the bosses.

5. Use corrugated rubber covered revolving top clearers.

Preferred Build for Yarns to be Spooled. For yarns that are to be processed on Barber-Colman automatic spoolers, the combination wind gives best results, said 11 of the 19 mill spokesmen who answered this question. Six prefer the warp build; two, filling wind.

Of special interest to the group was the following report from Mill M where 20s to 30s yarns were processed on C-type spoolers with balloon breakers:

"High twist yarns (4.00 twist multiple or greater) will run more satisfactorily on combination wind at higher speeds (up to maximum of 1,200 ypm). Yarns with less than 4.00 twist multiple will be increasingly more difficult to spool from combination wind as the twist multiple is decreased and the yarn gets coarser."

Interest in Filling Wind Mounting. Only one mill reported exclusive use of the filling build for yarns to be processed on automatic spoolers. Yarns produced there are 48.5s; stroke is 2 7/16″; ring size, 2″; spooler speed, 1000 ypm; balloon breakers are not used. However, spokesmen for nine mills said they either are presently experimenting with a new type filling wind cam which is designed for yarns that are to be spooled or have already tried it.

Especially interesting to the group was the following report from Mill V:

"We have had best results on Barber-Colman spooling using a six-point filling cam. This is on a frame with 2¼″ rings running a 10⅜″ long warp bobbin. Our spoolers wind at a rate of 1,240 ypm. Yarn counts are 19.50s warp, 23.00s warp, 31.00s warp, and 23s filling." *(Continued next page)*

ROLL AND GEAR RUNOUT SPECIFIED

Mill	Bottom Rolls (in.)	Gears (in.)
B	.003	——
F	.0025	.002
H	.003	.003
J	.0015	——
R	.003	——
S	.002 (new) .003 (reworked)	.003
T	.003 - .006	.003
V	.003	——

WHY TOP APRONS LOAD UP WITH LINT

Cause	Remedy
Oil on aprons (4 mills)	Install antifriction top and bottom rolls Avoid overlubrication Wash aprons every five months
Ozone cracks (1 mill)	Run one revolving top clearer per side, swapping stands periodically
Transfer of lint from bottom apron to top apron (1 mill)	Install clearers on bottom aprons

Asked from the floor if difficulty had been experienced in keeping the cam tight, the mill's superintendent replied, "No."

Balloon breakers are used on spoolers in only three of the mills, all of which produce coarse warp yarns (10s to 20s) and utilize the combination wind. Spooling speed in two of the mills is 1200 ypm; speed was not reported by the third.

Runout Specified for Bottom Rolls and Gears. When ordering replacement bottom steel rolls and draft gears for spinning frames, operating executives in ten Georgia mills specify that the runout does not exceed the amount shown in the accompanying box.

Running Double Apron Drafting Systems. Roll scrubbing cycles on double apron drafting systems varied from once every three months to once a year.

Three months is the interval in four of the 15 mills from which replies were received; five months in one; six months in four; nine months in one; and annually in one. In Mill A, however, steel rolls have been scrubbed only once in the past 15 years."

"It has been our experience," the spokesman said, "that this operation will not justify the lost production as a result of the machine downtime. We do, however, remove our top rolls and clean our long draft aprons and steel rolls with fingers every 12 weeks.

"We run low middling and strict low middling cotton, .72 hank to 1.80 hank roving, with a 12.15 to 15.50 draft, 4.75 twist multiple on warp and 4.32 twist multiple on filling, 175 - 200 rpm front roll speed, and a 7900 spindle speed. We clean our top rolls with roll picker once every 80 hours."

Only two other mills were said to be doing cleaning (other than roll picking and that done by spinners) between scrubbing cycles.

At Mill J operatives brush steel rolls and between aprons with a finger type brush once every two weeks; back lap sticks are cleaned at the same time.

At Mill M the cage section is cleaned every three months and bottom rolls scrubbed every six months.

Top Apron Loading. Several of the operating executives expressed opinions as to why the top aprons of double apron drafting systems load up with lint and told the group what steps they have taken in an effort to eliminate this. Refer to the accompanying box for a tabulation of this information.

Frame and Room Cleaning Equipment. Operating executives of two Georgia mills gave rather complete reports of benefits which have been derived from the new type frame and room cleaners with underframe sleeves and dampers. Equipment in both mills was said to blow into the drafting zone, and it does not include the floor sweeper feature. Following are the comments of each:

Mill B: We have had this type cleaner for about two years, and we are well pleased with it. Our spinners' cleaning time was decreased from 35 minutes per 100 spindle 40 hours to 11 minutes per 100 spindle 40 hours. We changed our roll picking cycle from 72 hours to 209 hours. Little or no effect on ends down has been observed. Our slubs increased slightly. Yarn produced is 21s to 31s from 1" Middling cotton.

Mill U: We have this type cleaner over 99 frames. Now we wipe backs one time every eight hours, whereas we used to wipe them four times each eight hours. Now we rub rails two times every eight hours compared to eight times per eight hours before. Ends down and slubs have both been helped by these cleaners.

Nylon Tapes. Experience of Georgia operating executives with nylon tapes on spinning frames appears to be quite satisfactory. Of the 12 reports received, only two were unfavorable, and these were based on test installations.

Life of nylon tapes has been found to be at least twice that of the cotton type in Mills B, C, and H. Power savings were reported at Mills C, H, and L.

The bonding process for splicing tape ends is used in all of these mills, rather than sewing. In four plants some trouble with the bonds and equipment was encountered, but this was said to have been overcome.

Readers who are considering using nylon tapes may find helpful the following reports from two mills in which nylon tapes have been extensively used for a long period of time:

Mill A: "About a year and one half ago we started using nylon tape. We have found the average life to be over twice that of cotton. . . The tape cost is about the

Have a carding problem?

Check this report of the Eastern Carolina STA meeting for an answer

Left: Marion Allison presided at the meeting. Center: Frank Boyd, Erwin Mills, led the discussion on carding. Right: New officers of the Eastern Carolina Division, STA, are, l-r: Byron Stevens, Erwin Mills, chairman; Joe Gilbert, Hart Cotton Mills, vice-chairman; Joe Hughes, Eno Cotton Mills, treasurer; and W. R. Rogers, Holt Williamson Mfg. Co., elected to the executive board.

Staff report
Exclusive

A LIVELY panel discussion of carding problems featured the recent meeting of the Eastern Carolina Division, Southern Textile Association, at Raleigh, N. C.

In discussing pneumatic racks on picker loggerheads, one mill man said such racks permitted his mill to make a 61-yard lap of the same diameter as previously and with no lap-splitting difficulties. Another mill reported that overall lap weight was increased from 45 pounds to 54 pounds by using pneumatic racks on loggerheads only. All reports on this picker accessory were favorable.

Mill men reporting experience with hard-point card wire indicated an extended grinding interval with an accompanying reduction in nep count. In one instance nep count with the new clothing was about three per grain of card web as compared to six neps per grain before changing clothing.

Card grinding technique was usually altered upon changing to the hard-point wire clothing. One mill formerly ground 8 hours, but changed to 2½ hours of grinding with the grinder pulled down hard. Speed of the grinder was slowed, and the wire was not "hooked."

Bolting down the feed roll on cards after removing weights prevents lumps from being snatched into the card by the licker-in, according to experience in one mill. The licker-in tears up lumps and feeds the stock gently, and if a lump is big or hard, a belt is thrown off, thereby preventing damage to the card.

Another advantageous change on cards was described:

The flat brush drive was disconnected and the brushes were set slightly deeper and allowed to rub on the flats, thereby keeping the flats cleaner than formerly.

Carding rates ranged from 9 pounds per hour to 40 pounds per hour (the latter for carpet yarns). Drawing speeds were reported in the range of 300-400 feet per minute; however, a more powerful motor was recommended for speeds over 300 feet per minute.

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same as cotton since the nylon lasts longer than the cotton, but we realize savings in labor since we do not have to replace as many tapes."

Mill L: "We have been using nylon tapes on all of our spinning for about three years. . . . There has been a 60 per cent reduction in the number of tapes off, so less labor is required to replace tapes and production is increased because there are fewer idle spindles. We figure that we are saving $2.00 per frame on power each year."

Preventing Lost Ends on Section Beams. Maintenance of drop wires and brakes in good operating condition is the most effective preventive for lost ends, the group of operating executives reported.

The drop wire maintenance system used at Mill R consists of checking the operation of each drop wire every six months. With the cam in high position a test lamp is applied to each drop wire. If the drop wire is functioning properly, the lamp burns when the wire drops.

At Mill T it has been found that keeping a running record of lost ends is helpful in keeping the number of lost ends to a minimum.

Fig. 1. Vertical flame test, treated fabric.

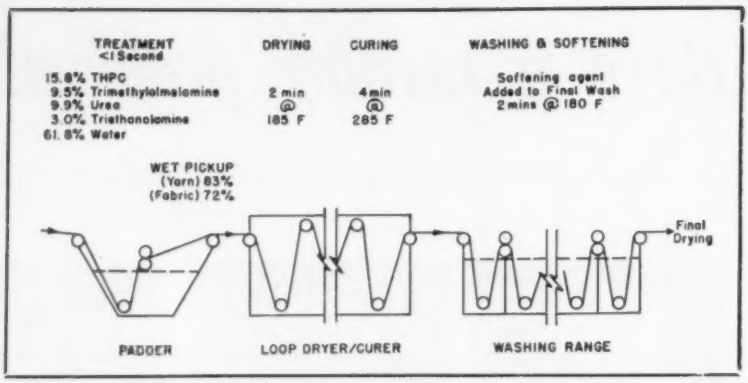


Fig. 2. THPC-methylolmelamine resin treatment, continuous process.

How much will THPC

by O. J. McMillan, Jr.[1]
Southern Regional Research Laboratory[2]

Exclusive

THE THPC-methylolmelamine process (4, 5, 6, 7, 8, 9)[3] for imparting flame resistance to cotton was developed at the Southern Regional Research Laboratory as part of a research program to increase cotton utilization. This process, involving the use of THPC[4], methylolmelamine, urea, and triethanolamine, has created widespread interest in the textile finishing field.

In addition to its many civilian applications, the process has been found to yield a product that will meet the requirements of certain military specifications. In *Figure 1* the flame resistance of the fabric is illustrated.

Now in limited commercial use in the United States and in England, the process is very satisfactory for use on most cotton fabrics of loose weave, and on heavier fabrics. It is very good on fabrics weighing 6 ounces per square yard or more, and on some fabrics of lighter weights and loose construction, for example, 3/3 steep twill of about 4 ounces per square yard.

There is a real need to protect fabrics from flammability. In the United States alone it is estimated that more than 1000 people die annually because of accidents involving flammability of textiles; many more suffer nonfatal injuries.

The Process. The process, schematically diagrammed in *Figure 2*, is a relatively simple one of padding an aqueous solution of the chemicals into the cotton, curing at an elevated temperature, washing the cotton free of chemical by-products, and drying. Conventional textile processing equipment is well suited to this process.

A three-roll padder, well-vented roller-type drying and curing oven, continuous washing range, and tenter frame for final drying, are needed for fabric processing. For yarn processing (in rope form) an additional roller-type drying oven is substituted for the tenter frame.

The resin-treated cotton product has a high degree of flame resistance and the finish has very good permanence to laundering. It has been found that a considerable amount of wrinkle resistance and rot resistance is also imparted to cotton by this resin treatment.

Cost. This cost study was made for the continuous processing of cotton yarn and fabric in hypothetical plants. A yarn processing rate of 60 yards per minute in ball warp form, at a density of one pound per linear yard, and a fabric processing rate of 120 yards per minute of 60-inch-wide fabric weighing 0.81 pound per linear yard were assumed.

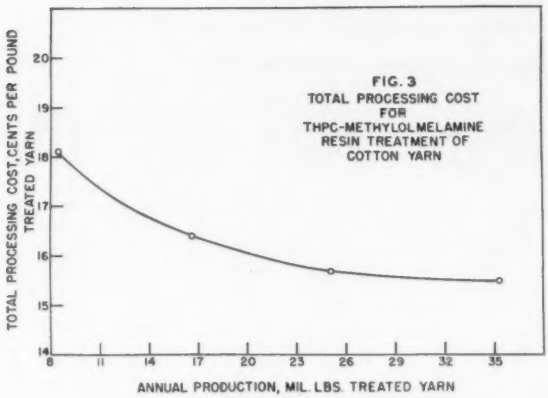
Annual productions were varied by operation of a particular plant for one, two, and three shifts for 250 days per year, and for three shifts for 350 days per year.

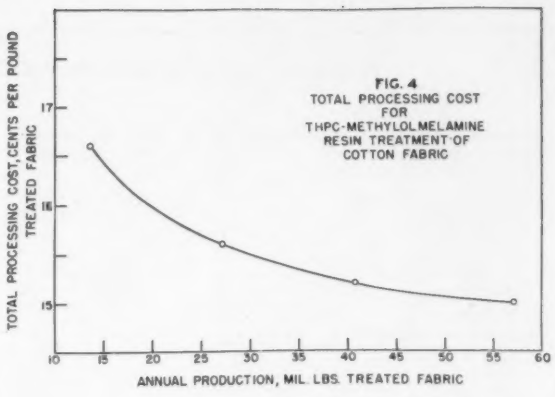
Investment Costs. Plant investment costs for hypothetical yarn and fabric processing plants are shown in *Table I.* Such items as process piping, instrumentation, and outside lines were determined as percentages of installed equipment costs (1, 2, 3, 10). Main buildings are of steel frame, concrete and brick at $21.50 per square foot, and warehouse for dry storage was allowed at $8 per square foot.

Engineering and construction costs and contingencies were included in arriving at total plant cost.

Cost of Chemicals. In order to

[1]Co-authors: K. M. Decossas, E. F. Pollard, W. A. Reeves, and J. D. Guthrie.
[2]One of the laboratories of the Southern Utilization Research and Development Division, Agricultural Research Service, U. S. Department of Agriculture; it is located at New Orleans, La.
[3]Numbers in parentheses are literature references at the end of this article.
[4]Tetrakis (hydroxymethyl) phosphonium chloride.





flameproofing cost?

bring this cost estimate closer to what might be experienced in actual practice by plants using large quantities of chemicals, a projected price for THPC of $0.70 per pound has been used. The current price of this compound is about $1.50 per pound in ton lots.

The prices used for other chemicals are current quotations since all are presently in large-scale commercial production, and quantities to be used in this process would not materially affect the market.

Labor Costs. Labor costs are estimated as those applicable to a textile finishing plant, with skilled labor at $2.35 per hour and semi-skilled labor at $1.62 per hour. Double time was used for weekend work and a 10 per cent night labor differential was used for second- and third-shift operation.

Total Processing Cost. In this estimate, total cost, as shown in *Table II,* is the sum of direct, indirect, and fixed processing costs, contingencies, and general expenses. Total cost in each estimate is exclusive of the cost of cotton used and is assumed to be custom processing without profit.

The cost of processing yarn *(Table II)* to 16.6% resin content exclusive of the cost of cotton was determined to be 18.1c to 21.1c per pound of untreated cotton. When expressed on a product basis, somewhat lower processing costs are indicated, varying from 15.5c to 18.1c per pound of resin-treated yarn.

The cost of processing fabric to 16.6% resin content exclusive of the cost of fabric was determined to be 14.2c to 15.7c per yard of (60 inches wide, 0.81 pound per linear yard) fabric. A range of

TABLE I. THPC-Methylolmelamine Treatment of Cotton: Investment Costs

	Yarn				Fabric			
Annual Production[1] (1000 units)	8,395 lb	16,790 lb	25,186 lb	35,260 lb	14,400 yd	28,800 yd	43,200 yd	60,480 yd
Annual Operation (days)	250	250	250	350	250	250	250	350
Daily Operation (hours)	8	16	24	24	8	16	24	24
Production Rate (linear yd/min)	60	60	60	60	120	120	120	120
(a) Installed Equipment	$613,011	$621,296	$621,296	$621,296	$587,391	$595,649	$595,649	$595,649
(b) Process Piping (13% of a)	79,691	80,765	80,765	80,765	76,361	77,434	77,434	77,434
(c) Instrumentation (2% of a)	12,260	12,425	12,425	12,425	11,748	11,913	11,913	11,913
(d) Outside Lines (3% of a)	18,390	18,638	18,638	18,638	17,622	17,869	17,869	17,869
(e) Auxiliary Facilities	100,000	100,000	100,000	100,000	120,000	120,000	120,000	120,000
(f) Buildings	270,819	285,291	285,291	285,291	258,405	280,821	280,821	280,821
(g) Total Physical Plant Cost	1,094,171	1,118,415	1,118,415	1,118,415	1,071,527	1,103,686	1,103,686	1,103,686
(h) Engineering and Construction (20% of g)	218,834	223,678	223,678	223,678	214,305	220,737	220,737	220,737
(i) Contingencies (15% of g)	164,126	167,758	167,758	167,758	160,729	165,553	165,553	165,553
(j) Total Plant Cost	$1,477,131	$1,509,851	$1,509,851	$1,509,851	$1,446,561	$1,489,976	$1,489,976	$1,489,976

[1]*Annual productions were varied by operation of a particular plant for one, two, and three shifts for 250 days per year, and for three shifts for 350 days per year.*

TABLE 2. THPC-Methylolmelamine Treatment of Cotton: Processing Costs

	Yarn				Fabric			
Annual Production[1] (1000 units)	8,395 lb	16,790 lb	25,186 lb	35,260 lb	14,400 yd	28,800 yd	43,200 yd	60,480 yd
Annual Operation (Days)	250	250	250	350	250	250	250	350
Daily Operation (Hours)	8	16	24	24	8	16	24	24
Direct Processing Cost	$1,091,957	$2,128,525	$3,162,787	$4,432,457	$1,722,191	$3,390,652	$5,056,378	$7,083,805
Chemicals	976,032	1,952,064	2,928,096	4,099,334	1,599,408	3,198,816	4,798,224	6,717,514
Labor	20,500	43,500	65,600	118,080	20,500	43,500	65,600	118,080
Supervision	2,050	4,350	6,560	11,808	2,050	4,350	6,560	11,808
Maintenance	51,700	52,844	52,844	52,844	50,630	52,149	52,149	52,149
Plant Supplies	7,755	7,927	7,927	7,927	7,595	7,822	7,822	7,822
Utilities	33,920	67,840	101,760	142,464	42,008	84,015	126,023	176,432
Indirect Processing Cost	21,946	32,352	42,075	65,166	33,198	55,218	76,461	113,376
Payroll Overhead	3,383	7,178	10,824	19,483	3,383	7,178	10,824	19,483
General Plant Overhead	18,563	25,174	31,251	45,683	18,295	25,000	31,077	45,509
Packaging	—	—	—	—	11,520	23,040	34,560	48,384
Fixed Processing Cost	124,485	126,898	126,898	126,898	121,607	124,866	124,866	124,866
Insurance	14,771	15,098	15,098	15,098	14,466	14,900	14,900	14,900
Property Taxes	29,542	30,196	30,196	30,196	28,932	29,800	29,800	29,800
Depreciation	80,172	81,604	81,604	81,604	78,409	80,166	80,166	80,166
Contingencies	61,919	114,389	166,588	231,226	93,860	178,537	262,885	366,102
General Expenses	216,774	340,094	461,145	611,128	289,402	487,905	683,871	922,948
Gen. Admn. & Office Overhead	39,609	72,065	104,950	145,672	59,132	112,478	165,618	230,644
Financing Cost	99,747	123,899	146,294	174,111	112,006	150,471	187,017	231,016
Sales Cost	78,018	144,130	209,901	291,345	118,264	224,956	331,236	461,288
Total Processing Cost	1,517,081	2,742,258	3,959,493	5,466,875	2,260,458	4,237,178	6,204,461	8,611,097
Cents per unit untreated cotton	21.1c lb	19.1c lb	18.3c lb	18.1c lb	15.7c yd	14.7c yd	14.4c yd	14.2c yd
Cents per pound of product	18.1	16.4	15.7	15.5	16.6	15.6	15.2	15.0

[1]*Annual productions were varied by operation of a particular plant for one, two, and three shifts for 250 days per year, and for three shifts for 350 days per year.*

15.0c to 16.6c per pound of product was determined as the processing cost for fabric.

It is apparent from *Table II*, and *Figures* 3 and 4, that lower processing costs for both yarn and fabric are obtained at higher annual productions, approaching maximum plant capacities.

Summary. Preliminary cost studies for the THPC-methylolmelamine treatment of cotton show that protection from flammability can be inexpensive. The resin treatment needed to impart the required degree of flame resistance has been estimated to cost as little as 15c per pound of product, based on a reasonable projected price of 70c per pound of THPC.

Acknowledgment

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1958 tufted textile shipments up 8 per cent over 1957

■ TOTAL shipments of tufted textile products amounted to $382.5 million in 1958, the Bureau of the Census reported recently. This was $28.6 million more than the value of tufted products shipped in 1957.

Shipments of tufted rugs and carpeting last year amounted to $326.7 million, 10 per cent more than the 1957 value. According to the Bureau, this increase was largely the result of increased shipments of rugs and carpeting larger than 4' x 6'. Shipments of rugs 4' x 6' and smaller increased in 1958 to $66.7 million from the 1957 level of $65.5 million.

The total quantity of tufted rugs and carpeting shipped last year amounted to 113,497,000 sq yd—79,451,000 yards of goods larger than 4' x 6' and 34,046,000 yards of scatter rugs, bath mats and sets. This total is 13,846,000 yards greater than that reported in 1957.

Shipments of tufted robes dropped from 2,055,000 in 1957 to 1,567,000 last year, while the tufted bedspread total was approximately the same—13,716,000 in 1958 and 13,778,000 in 1957.

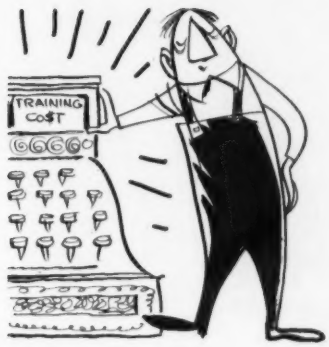
YARNS & FABRICS USED BY TUFTERS

(Thousands of pounds)

	1957	1958
YARNS	202,963	206,726
Cotton	64,394	65,319
100% rayon & acetate	106,238	93,193
Wool	14,768	23,431
Other	17,563	24,783
FABRICS	95,156	100,873
Duck	21,335	24,027
Sheeting	23,995	23,770
Jute & other	49,826	53,076

Do you hire the blind to see?

Use of the personnel selection tools described here costs much less than high trainee turnover



...IT COSTS TO HIRE AND TRAIN...

by Robert I. Weil
Personnel manager
The Puritan Sportswear Corp.

Exclusive

OUR COMPANY rejects the initial application of about every tenth applicant because he does not possess sufficient vision to perform the job he has applied for. Yet only a few years ago we would have hired this tenth applicant without question.

Then, after we had given him hours or weeks of useless training (after a considerable expenditure of funds) he would leave our employ. Sometimes he would be discharged "because he could not learn the job!" Often he would quit after a few weeks of little progress.

Training Costs. It costs considerably to hire and train a new employee. For example, the approximate cost of a new garment looper might be:

Administrative cost of hiring (interviewer's time, clerical work, cost of advertising and testing, etc.)	$ 60.00
Nonproductive wages paid until learner earns piece-rate minimum	350.00
Instructor's time	50.00
Loss of machine time, utilities, space	20.00
Waste generated by training	25.00
Total investment in training garment looper:	$505.00

The above example illustrates the total cost of producing a trained employee. The largest part of this is incurred during the learner's first two weeks, because that is when he produces least and requires the most instruction. In the interest of efficiency, it is, therefore, very important to eliminate the employee who will only stay a few days or a few weeks.

Modern management has many simple and effective tools available which increase the likelihood of hiring the right person, the one that can learn the job, and do the job, and who will stay on the job. Some of these tools are available to most employers free of charge, some are simple devices that can be administered by a clerk or nurse, and a few require technical competence in personnel administration. Let us examine a few selection tools for the textile industry.

Testing. The U. S. Bureau of Employment Security has developed a great many practical tests that are available to your local State Employment Office for use in referring applicants to you. Some of these tests are especially designed to measure physical characteristics, such as hand-eye coordination and finger dexterity, which can be directly related to specific factory jobs.

...SIMPLE TOOLS INCREASE MANAGEMENTS LIKELIHOOD OF HIRING THE RIGHT PERSON

Other tests measure basic knowledge and aptitudes for such occupational areas as mechanical work, clerical jobs, etc. The Bureau also has available "intelligence" and interest tests, used primarily for new school graduates. By establishing a good working relationship with your local State Employment Office, you can obtain properly tested applicants for many specific jobs in your mill.

To do this you must cooperate with your local office. Give them descriptions of your most common jobs. Invite their test man to look over your operation.

Insist thereafter that all of your applicants be tested by the employment office before you interview them. Use of this free service will assure you of more qualified applicants and will save you the trouble of interviewing everyone who comes to your plant door.

There are also a great many "self administered" tests on the market today. Many of these could be useful to you, *but only if validated for your jobs and plant* by someone expert in the field of testing.

The tests described in the mail order literature which your plant probably receives from time to time undoubtedly measure something. But before you use them,

"JUST PASSING THROUGH AND THOUGHT I'D SEE IF YOU HAD ANYTHING I COULD DO."

make sure that they measure something that is directly related to the jobs you are trying to fill.

Vision. Dexterity, interest, and proper mental level are not the only prerequisites for satisfactory employees. Another easily measured, but often neglected area in hiring, is physical capacity.

At the beginning of this article we pointed out that our company rejects about 10 per cent of our applicants because they do not have sufficient vision to perform the job applied for. We check the vision of those who wear glasses while their glasses are in place because we wish to determine their ability to see on the job.

There are simple devices on the market for occupational visual testing that cost no more than the training of a single garment looper.

In the old days, industry used wall charts to measure visual ability. This method measures only one thing—ability to see at a distance. The new devices determine much more.

Our instrument measures visual ability, both at a distance and at 12 to 14 inches. It tells us an applicant's ability to perceive depth and color. In addition, an available attachment measures "peripheral" vision, i.e. the visual

SIDE-TO-SIDE VISION...TESTED

span from side to side and up and down.

Nowadays, when we hire a garment looper trainee, we are certain that she can see well at close range. When we employ a man to train as a cutter, we know that he can judge distance.

We are certain that the men in our dye house can tell red from green, etc. And this program has saved us a great many dollars.

As a side product, our visual testing program has also helped our employee relations. We try to reschedule employees for eye tests periodically and refer them to their doctors when we find vision impaired. Since uncorrected visual defects can cause serious tensions, nervousness, fatigue, and a general loss of efficiency, we think that the eye testing program has made our plant a happier place to work.

Physical Examination. Another important part of every employment program should be a preemployment physical examination by a competent physician. Although the number of applicants rejected because of health is much smaller than those rejected for other reasons, this type of selection is of special significance. The plant doctor eliminates the potential employees who end up as workman's compensation claims, those who are frequently absent because of ill health. Often they are alcoholics.

For example, an athletic body can contain a rheumatic heart. And a man with a bad heart on a heavy job leaves an employer open to substantial insurance claims. Some of the most frequent disqualifying or limiting factors uncovered by our doctor and nurse are varicosities, heart conditions, ruptures, and allergies to materials used in our mill.

Some of these conditions only limit the type of job on which an applicant can be placed. Others may deter our hiring him at all. To sum up, when we put a new employee on a job, we *know* that he is physically capable of doing it.

The selection tools described herein are objective, and they are not based on an interviewer's judgment or prejudice. They are scientific measurements of prerequisites compared to certain predetermined job standards. Available to almost every employer, they cost much less than the high rate of trainee turnover which is the alternative.

Philadelphia textile research center planned

■ PLANS to develop "the nation's most advanced textile research center" have been announced by Philadelphia Textile Institute.

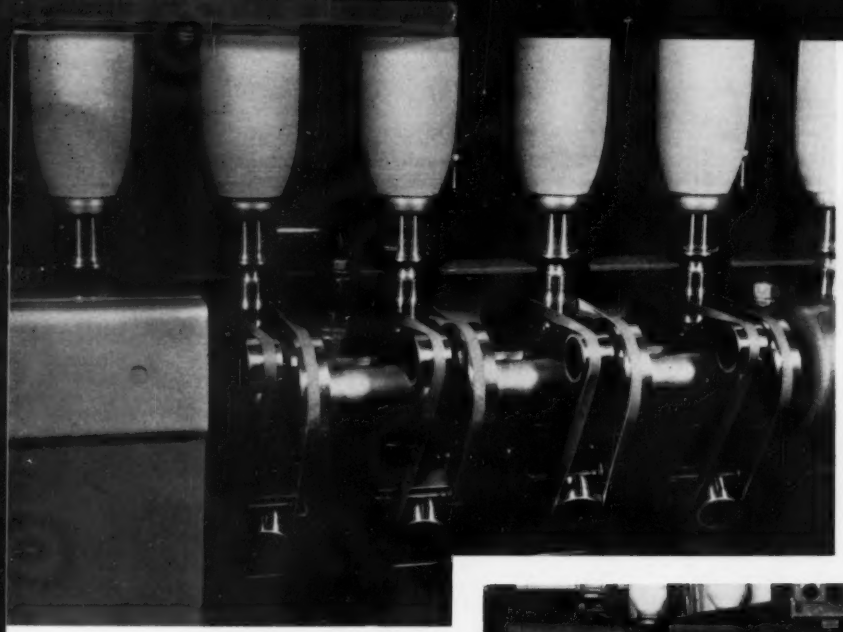
Interest in the development of the center has been spurred by PTI's Diamond Jubilee Progress Fund. Goal of the drive for funds is $150,000, which will be used to improve the college's educational services, as well as its research facilities.

PTI's president, Dr. Bertram W. Hayward, said the ultra-modern facilities would enable the textile college to expand immensely its research service for every phase of the textile industry.

The greater portion of the school's research work has been directed to the solution of specific problems for the textile industry. These projects have included study and testing of new fibers, new finishes, and new treatments.

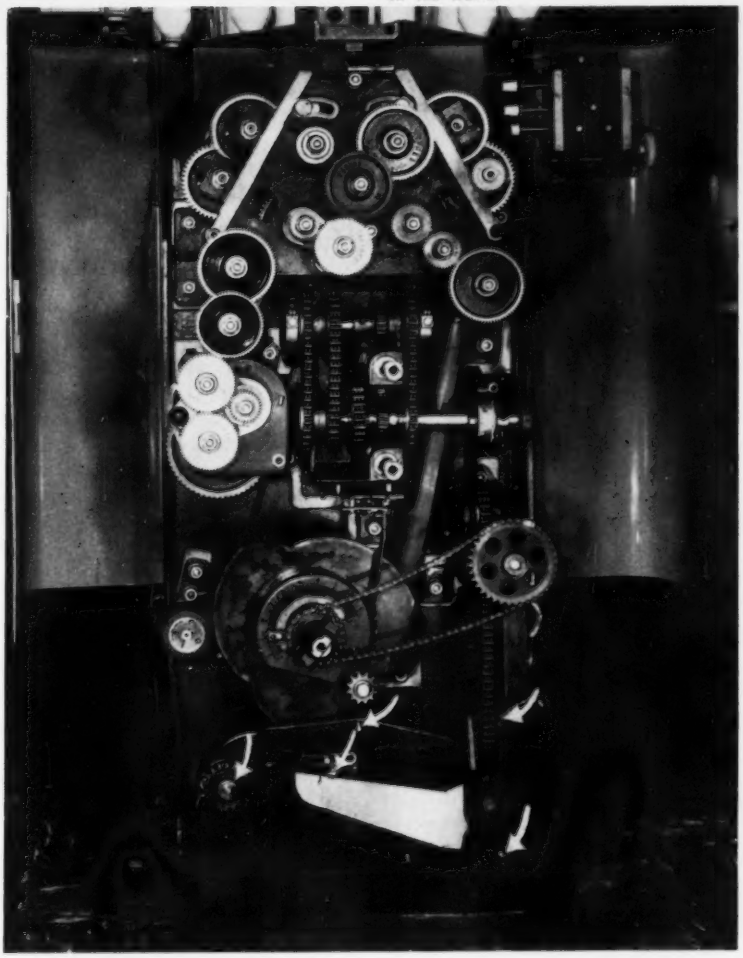
One of the most notable research achievements of the school has been the development, in conjunction with Baylor University, of a knitted artificial aorta of Dacron. These tubes are credited with the saving of hundreds of lives in surgery and are now being produced commercially.

Dr. Hayward said that PTI's research program has grown with the college over the past three-quarters of a century. During that time, research personnel have worked on application research projects with more than 750 corporations, universities, and governmental agencies.



Ball bearings on this spinning frame eliminated the cylinder and its bearings, tapes and their tension pulleys, all maintenance associated with those parts, and made the side shaft drive possible.

Arrows point to the six bearings on the frame that require maintenance (two bearings are in the sprocket at tip of lower left arrow). There are nearly 700 bearings on the frame.



Exclusive

Sealed ball bearings keep new frames humming a

TIGHT-PULLEY SONG

BACK in the early '20's, textile mill operatives reported for work early—the last whistle usually blew at 6 a.m.—but maintenance men reported even earlier to oil line-shaft and machine bearings. Bearings in those days were made of iron and babbitt, lubrication was by chain oiler and wick and men with oil cans. Power was supplied by steam engines.

Bearings sometimes ran dry, resulting in fires and certain downtime. "Frozen" bearings stopped many spindles, and repairs were expensive and nonproductive. Dripping and spraying oil spoiled yarn. These troublesome mill conditions have been eliminated by the advent and gradual improvement of integral sealed ball bearings.

Anti-friction bearings came into textile use slowly, first in slashers, looms, lappers, and, finally, into the whole range of machinery. Due to improper installation, some early ball bearings failed and contributed to the slow evolution.

Forty years ago machinery makers were forced to design around iron and babbitt bearings to maintain competitive prices, another contributing factor to the slow introduction to ball bearings in textiles. Credit for initial industry use and the eventual demand for integral ball bearing equipped machinery must go to the mills themselves.

Forty Years of Progress. In 1920 one of the first integral closures

for ball bearings was patented. Although of an excellent design, this closure's use was limited. But it did lead to better and better designs as research kept pace with the increased uses and more demanding service required of ball bearings.

The modern integral seal ball bearing design is capable of lasting the life of the machine, never needs attention or relubrication, and seals lubricants in and lint out.

Some textile machines today are running with spindle speeds only slightly faster than those of yesterday. Some actually run at slower speeds.

Roving frames, for example, run at slower speeds than they did forty years ago. But, roving packages are considerably larger, and thus the productivity of these machines is greater by a substantial margin.

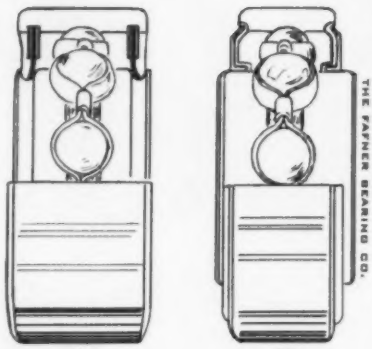
Spinning frames run approximately 25 per cent faster than 40 years ago, but again the packages are considerably larger so the net gain in operational efficiency is greater than the speeds would indicate at first glance.

On the other hand, some textile machines today are running more than 400 per cent faster than they did 40 years ago. In 1920, before the day of the integral ball bearing, drawing frame front rolls operated at approximately 100-110 feet per minute—modern drawing frames have a front roll speed of over *400 feet per minute*. Automatic filling winders had a speed of approximately 5,000 rpm in 1920, now they operate faster than 12,500 rpm.

While the contribution to higher speeds cannot be ignored, the integral sealed ball bearing's other contributions such as lubrication advantages and reduced maintenance are more important in the textile industry.

Design Efficiency. Development of modern, highly productive textile machinery has paralleled the development of more efficient ball bearings and sealing devices. This has been the result of consultation over design problems.

Often a ball bearing application requires something special in the way of a seal, shield, or other limiting factor. By cooperation in design stages, the costs of research and tooling can be kept lower. Thus, the machinery will reflect cost saving and efficient design.



Permanently lubricated ball bearings are sealed with contact (A) or labyrinth (B) type seals. Contact seals are used where speeds are low or moderate; labyrinth frictionless types where speeds are high. Both types provide maximum sealing to keep lubricant in and contaminants out.

Joint Research. One of the first joint-research problems licked by the engineers of textile machine manufacturers and bearing manufacturers working together was a special seal required for early machines to spin the new man-made nylon in 1937. A particularly difficult sealing problem existed in a gear box which, because of the high operational speed, caused oil to surge and leak.

When it was turned over to bearing engineers, a special seal was developed for it. It worked so well that the same device is still being used as originally designed.

An existing spinning frame with 288 spindles and conventional tape drive has 144 grease fittings for tape tension idlers. Periodically, these fittings must be lubricated, requiring downtime and loss of production.

Modern spinning frame design is typified by a new spindle drive system. On one new frame, there are 576 integral sealed ball bearings in the drive system, and none of them requires relubrication. All 144 tape tension idlers and their grease fittings are eliminated.

The tape drive system does not provide uniform speed since the arc of contact on the whorl is small. Moreover, when braking one spindle, the speed of three others is affected. A new side shaft drive uses individual belts, provides uniform speed, and operation of each spindle is independent of the rest of the frame.

Idler pulleys on the frame are the same diameter as spindle whorls (1.062") and turn at the same speed (up to 12,000 rpm). These pulleys employ a special shield providing an efficient, economical device to retain factory-metered grease. They also protect against lint and other contaminants, assuring long life and maintenance-free operation.

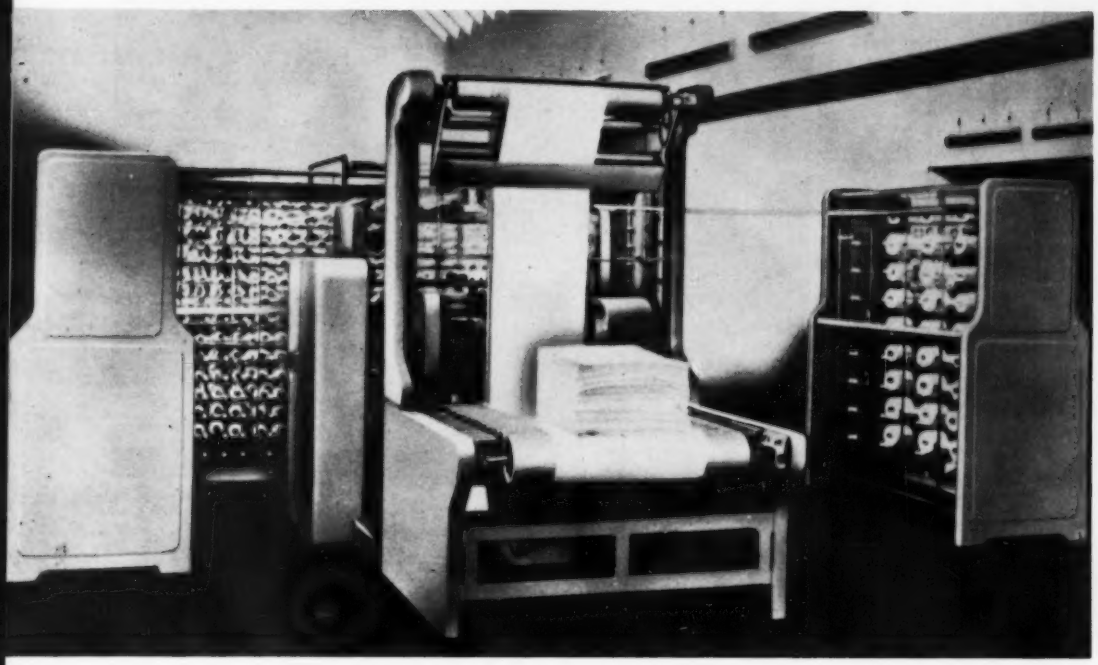
Integral Sealed Ball Bearings in Textile Machinery. Integral sealed ball bearings are those which are sealed on both sides. Since the design permits prelubrication, the correct amount of the right grease is metered into the bearing at manufacture. It never requires relubrication or attention of any kind.

Seals used in integral ball bearings for textile machinery are generally of two types: labyrinth (frictionless) and contact. High speed installations require the frictionless labyrinth seal consisting of two dished steel plates, one fixed to the bearing's inner ring and the other to the bearing's outer ring. The effectiveness of labyrinth seals depends upon the accuracy in manufacture of the two dished plates.

Contact seals on the other hand are friction seals, and thus are suitable for low or moderate operational speeds. Employing a thin flexible synthetic rubber coated fabric elastomer or rubber-like material impregnated with oil, which is held in place by one or more steel retaining washers, the seal rides on the bearing's inner ring. Thus, the seal's wiping action establishes the sealing as it rides the moving inner ring.

Typical of the uses for contact sealed ball bearings is that on the draft gearing in the head end of a late-model spinning frame. Here speeds are moderate, maximum sealing is required to keep out the lint, and contact sealed ball bearings are correct for longest life and maximum sealing.

East German machine makes a fabric at 4,160 *ppm*



Weaving with a sewing machine

by P. Abbenheim
Exclusive

SINCE the war there has been a concentrated effort by countries behind the Iron Curtain to develop new and faster ways of making fabrics. In Czechoslovakia work has centered on the jet looms. The narrow-width types work pneumatically, taking a measured length of filling and blowing it across the shed, while for wider fabrics a jet of water has been the filling carrier.

The pneumatic technique has been fairly successful and already Kovo P45 looms are running in that country on a commercial basis. The use of the water jet, however, seems not to have worked so well, but even that has reappeared at this year's Leipzig Fair and it is expected that we shall be hearing more about it within the coming months.

In East Germany cloth making appears to have followed two lines of progress. The Neumann loom represents one. Here filling yarn is supplied from a cone at the side of the loom and taken across by a tiny shuttle which is able to pass through a very much reduced shed. The other method was originally described as producing a nonwoven fabric, and consisted of stitching rows of yarns up a fleece of fiber which was either parallel or cross-laid.

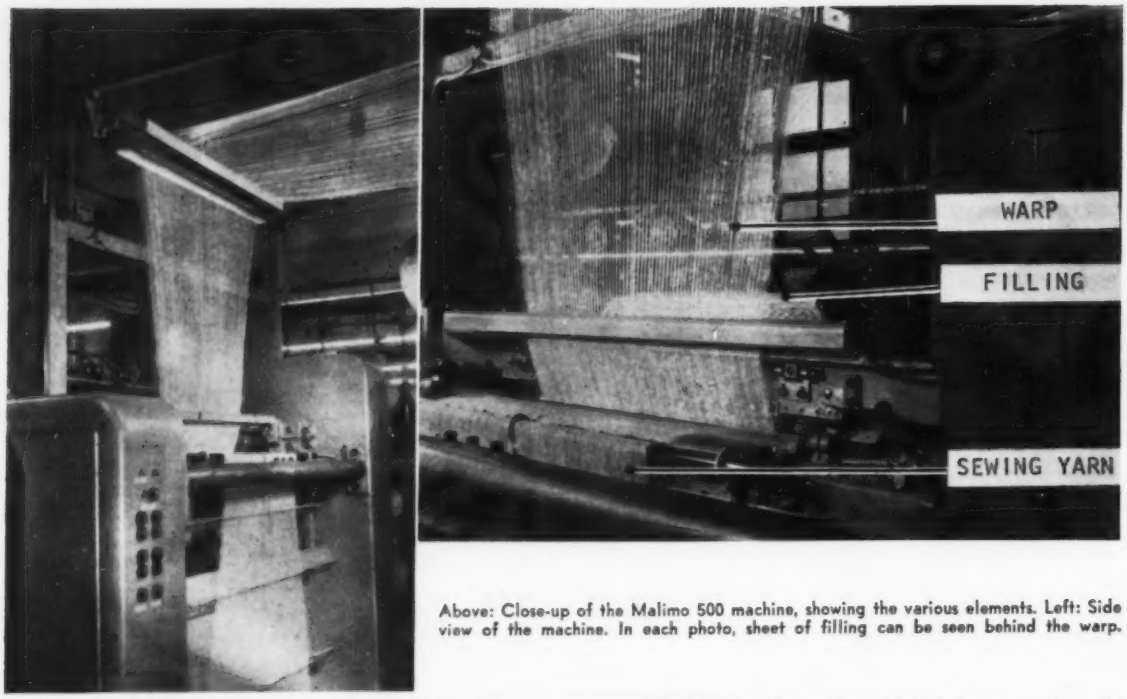
This latter technique has now been developed still further and the East Germans are reported to have evolved a cloth making system which will make a "woven" fabric with warp and filling yarns joined by a relatively simple sewing technique. The rate of production is said to be more than 4,000 "picks" per minute!

Fabric made by this new technique is being marketed in East Germany under the name "Malimo."

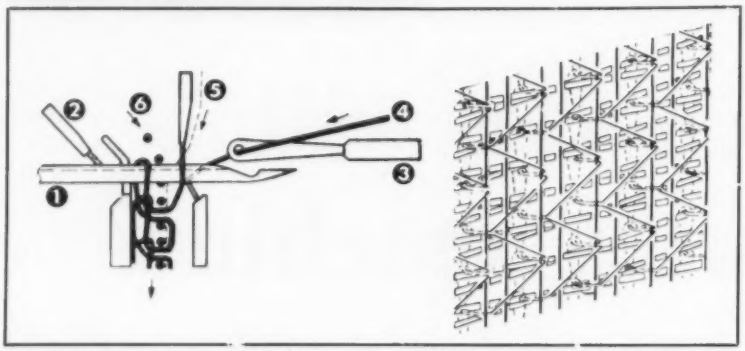
How It Works. Method of production on the Malimo 500 machine which makes these new fabrics is basically fairly simple. A sheet of warp is fed into the machine from a creel, another adjoining creel supplying a similar number of ends of sewing thread. The filling is provided from a creel at the side of the unit.

Between each end of warp in the actual "weaving" zone there is a chain stitch sewing unit, so that alternately there is an end of warp and a row of chain stitching.

The reason chain stitching was



Above: Close-up of the Malimo 500 machine, showing the various elements. Left: Side view of the machine. In each photo, sheet of filling can be seen behind the warp.



Left: Stitching arrangement—1. Pusher needle; 2. Latch wire and holder; 3. Sewing thread guider needle; 4. Sewing yarn; 5. Warp; 6. Filling. Right: Construction of fabric made on the Malimo 500 machine, showing the zig-zag stitching and the angled filling yarns.

selected as the ideal method of sewing, rather than lockstitching, was that the chain stitching system could operate with one end of yarn while for a lockstitch two threads were required—one for the main stitch and another in a shuttle to pass through the loop to lock it. This meant that the mechanism would be not only bulky, but also it would be necessary to replenish the shuttle in each unit as soon as it exhausted the supply of yarn. This would mean more complicated mechanisms if this were to be automatic and a loss of time if operatives had to undertake it.

In selecting a chain stitching system it was at once possible to make a very compact unit which would run efficiently and at high speeds.

The workers at the Karl Marx Stadt (previously Chemnitz) Research Institute approached the development of the new machine from two angles. The first concerned the method of laying the warp and filling across each other, while the second was concerned with making a multi-needle sewing machine with a narrow space between needles, high-speed, and with minimum attendance from the operatives. Obviously, the higher the production rate of a machine the more critical becomes its efficiency.

The problem that remained after deciding to work with a chain stitch was that of unravelling, for once the thread in a line of chain stitching is broken the row will run. In solving this a completely new needle was developed. This is called a "pusher needle".

People who have been concerned with the development of the FNF warp knitting machine in England have, however, commented that the new pusher needle closely resembles the needle used on the earliest forms of their knitting machine. On the FNF machine the eye of the needle is closed by a fine tube which runs up the outer tube that provides the hook of the needle. This development only became possible when tube manufacturers found a method of making fine tubes for hypodermics on a mass-production basis.

The East German needle does not, however, utilize tubes but is, instead, a grooved needle and in this groove moves a fine wire which slides down it to close the eye. This wire is for convenience called the latch wire, since it serves essentially the same function as the latch on a knitting needle.

In connection with this needle is

(Continued on page 121)

Tear along this line to post in the spinning department.

Break out and report all gouts

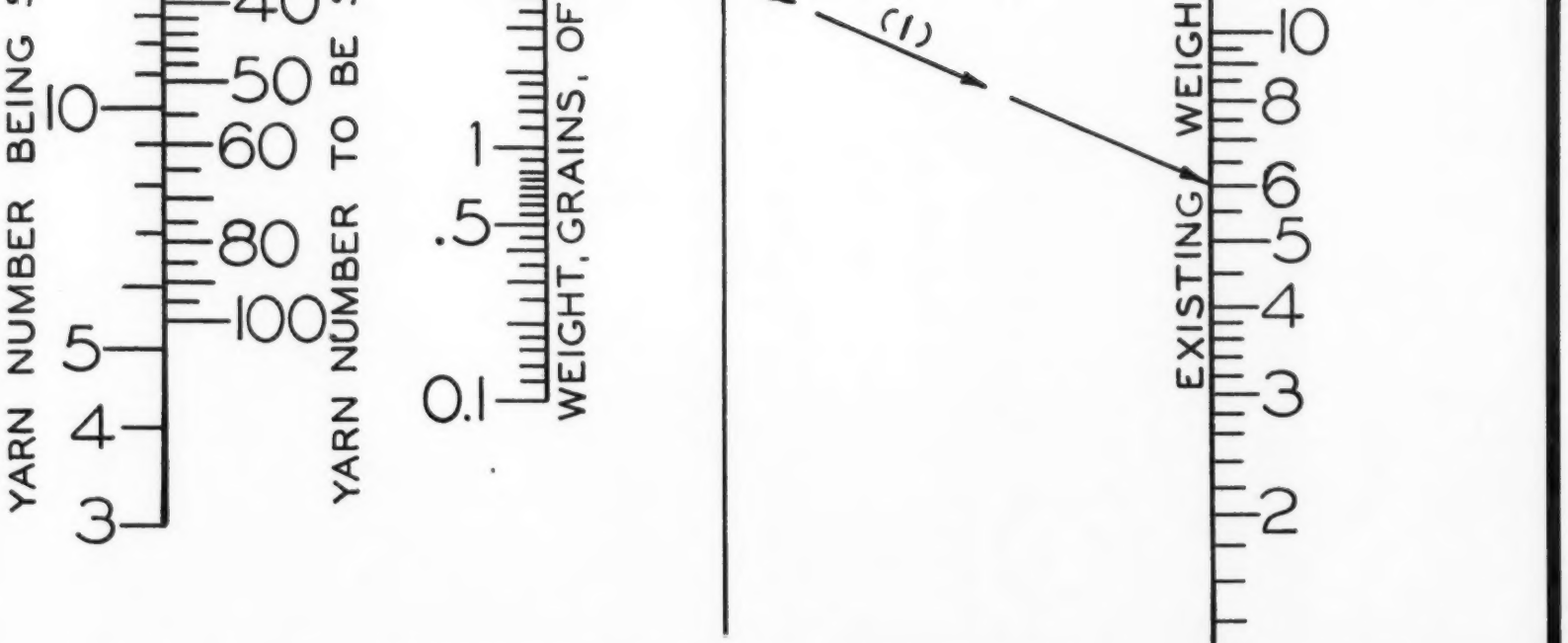
Textile Industries POSTER SERVICE

This is one of a series of manufacturing hints and employee reminders in poster form, designed for placing on mill bulletin boards. Reprints are available. Write to The Editors, "Textile Industries," 806 Peachtree St., N. E., Atlanta 8, Ga.

Textile Industries

33

Find traveler weight needed for yarn change



by Stephen D. George
International Engineering Associates

Exclusive

HERE is a simple and very fast way of finding the weight of the new traveler needed in changing from one yarn number to another.

Example: Find the weight of the new traveler when changing from a 30s yarn to 10s yarn if the existing weight of 10 travelers is six grains.

Solution: Enter the chart on the left at the number of the yarn being spun, 30s, and draw a straight line through the existing weight of 10 travelers, six grains, on the right. From the intersection of this line with the pivot, draw a straight line through the number of the yarn to be spun, 10s, on the left. At the intersection with the third scale from the left, read the weight of the 10 travelers as 18 grains.

This chart is based on

$$W = \frac{NT}{F}$$

where

W = weight in grains of 10 new travelers for the new yarn
N = number of the yarn being spun
T = weight in grains of 10 travelers being used
F = number of the yarn to be spun

FOR A REPRINT of this nomogram, write to The Editors, "Textile Industries," 806 Peachtree St., N. E., Atlanta 8, Georgia. Requests will be honored as long as the limited supply lasts.

Tear along this line to post in the spinning department.

Lester D. Sayers of Opp-Micolas Cotton Mills led the slashing discussion.

Using Teflon-coated slasher cylinders?

Compare your experience with that of Alabama mill men whose methods for shuttle maintenance and filling tension control are also reported here

Staff report

ON 2 MAY 1959 Alabama Textile Operating Executives held their spring meeting devoted to slashing and weaving. As has been the custom for some years, the meeting was held in Thach auditorium on the campus of the Alabama Polytechnic Institute, Auburn.

SLASHING

Lester D. Sayers, Opp-Micolas Cotton Mills, led this discussion, one question of which was:

Discuss advantages of Teflon covering for slasher cylinders and guide rolls. Give experience on the care, cost, and the life of the covering. Do you know of anything that can be sprayed or brushed on guide rolls to replace worn places in the covering?

Mill A, with no cylinders fitted with the covering, reports good service from the coating on guide rolls (easy to clean) but has had only six months experience with it and has no idea how long it will last. No method of spraying or brushing the covering onto worn areas is known.

Mill C has practically eliminated scale and laps on such rolls in gas-fired ovens, has run some rolls for three years before having to replace them, but has not tried anything to replace worn spots on the rolls.

Mill F finds it extremely important to use the Teflon covering on cylinder and guide rolls nearest the size box, as yarn does not stick to those members during high speed slashing. The cylinders have been in use for four years, and the covering has showed no sign of wearing in spots.

Mill H employs coated cylinders and rolls. Lint and trash do not adhere to the surfaces, and the cylinder coatings have given no trouble. But on rolls on pre-dry cans, where a considerable number of dye beams are run, pitting has occurred enough to prompt roll changing about once per year. The firm has satisfactorily used some tape on rollers.

Mill L uses some coated guide rolls on hot-air slashers and reports a cost of $44 for having a 6-inch-diameter roll covered (one roll lasted about four years) by an outside firm.

Mill M reports that the covering prevents size, yarn, etc., from sticking to the coated parts but has no idea how long the covering will last. Nor does the firm know of any methods of brushing or spraying new Teflon onto worn areas.

Mill N has no cost figures for the covering, but the firm reports that the coating prevents rust and protects against yarn sticking.

Mill P has noticed no sticking on the first four cylinders coated—no record of laps having been cut off these—but has no idea how long the protection will last.

At Mill Q Teflon has eliminated size sticking on cylinders and guide rolls. No particular care is given the covering, which the firm gives an estimated life of three to five years, and a cost of $125 plus freight is given for covering a 30″ x 60″ cylinder.

In summary, none of the mills using Teflon coatings on slasher cylinders and guide rolls is aware of a mill method for repairing isolated areas of Teflon, all are convinced that the coating eliminates virtually all sticking of yarn, size, and foreign matter, and few have used it long enough to evaluate its possible life span.

Two firms voiced a "rumor" that repairs could be made to damaged or eroded spots in the covering, but they gave no details. One plant is using Teflon tape to cover guide rolls in gas-fired ovens and reports that it is as expensive as the sprayed-on Teflon. The spokesman for this plant stated that the taped rolls are damaged by knives used sometimes in removing laps, but he did not say if the laps occurred more on the tape than on the sprayed Teflon nor if the Teflon tape scratched easier than the sprayed Teflon.

(Continued on page 109)

NEW

AMERICAN MONORAIL Roving Frame Cleaner

the ONLY Cleaner with INSTANT AUTOMATIC AIR CUT-OFF Anyplace over the frame . . . .

When roving frame stops, air from cleaner stops instantly regardless of position of cleaner. Cleaning resumes when cleaner passes over the next operating frame. This instant cut-off prevents doubling, roving breaks, roving stretch between front and flyer cap, sliver breaks and shredding. Your yarn quality goes up as soon as you install this cleaner.

A famous mill, where this new cleaner is in operation, reports a 70% decrease in slubs introduced during this operation. This permits closer spooler settings and results in higher quality yarn. 80% of normal manual cleaning is eliminated.

Thoroughly cleans — Flyer Caps . . . Tops of Roving Cans . . . Sliver rods and guides . . . Stop motion . . . Alleys.

AMERICAN MONORAIL

ENGINEERED MATERIALS HANDLING

OVERHEAD HANDLING EQUIPMENT

13106 ATHENS AVENUE CLEVELAND 7, OHIO

MEMBER OF AMERICAN TEXTILE MACHINERY ASSOCIATION

Alabama meeting

(from page 107)

WEAVING

Wendell Morriss, Avondale Mills, Birmingham, led this discussion, and one of the questions was: **Explain fully your method used for shuttle maintenance and filling tension control, giving**

a. Filling numbers

b. Material used for tensioning (bristles, fur, nylon loops, etc.)

c. Do you change material for tensioning for different weights of filling?

d. Give filling stops per loom hour for different weights of filling

e. Do you use a different shuttle maintenance program for light and heavy filling?

f. Do you align looms differently for coarse reeds to prevent washboarding shuttles?

At *Mill A* the shuttles are thoroughly checked twice per week by the loom fixers, once a week by the assistant foreman, and are given spot checks by the foreman. Filling numbers range from 9.40s to 21.90s, and bristles, fur, and nylon loops (in a few shuttles) are used as tensioning aids. From one filling weight to another the tensioning medium (bristles, fur, or nylon loops) is not changed but tension is. Coarse and fine reeds are aligned alike.

Each loom fixer at *Mill B* checks binder leather, pickers, fur, front box leather, quill alignment, shuttle screws, applies shuttle dressing, and bristles the shuttles on one-third the looms on his section each week. Fur and bottom bristle are the tensioning mediums used. Only one filling number (21s) and one reed (No. 26) are used.

Fixers at *Mill C* give one-third the looms on their sections weekly checks to assure correct maintenance of shuttles and reeds. Shuttles are inspected for loose screws, rough spots, quill misalignment, and reed wear pattern. Evidence of a shuttle scrubbing the reed brings on realignment, a condition checked by the assistant foreman before he issues order for a new shuttle. The plant produces 30s and 40s filling yarns, uses fur as a tensioning medium, and employs a single shuttle maintenance program for both light and heavy fillings. Filling stops per loom hour run from 12 to 24 on the 30s filling and from 15 to 25 on the 40s. No coarse reeds are used.

The looms at *Mill D* are carefully checked for alignment by the loom fixers. Before new shuttles are installed, either a head loom fixer or a foreman checks this alignment after the fixer has completed it. While the sections are divided equally among the first, second, and third shift fixers for routine maintenance, Friday is reserved for special checks on such items as loose shuttle springs, bristles, and rough places. Finally, the shuttles are tallowed on this day. The filling numbers run from 3.05s to 14.00s, both bristles and fur are employed as tensioning materials for all weights of filling, shuttle maintenance on both heavy and light fillings is alike, and the firm uses the same reed wire for all reeds.

Mill E fixers check one-third the looms on their sections weekly, use bristles and fur to tension filling counts ranging from 4.00s-27.00s. The same materials are used on all filling counts, but a different maintenance system is employed on shuttles to accommodate changes in yarn sizes. Filling stops per loom hour: 4.00s, 0.338 (soft twist); 7.50s, 0.196; 8.25s, 0.217; and 12.75s, 0.281. Coarse and fine reeds are aligned alike.

Both fur and bristles are used at *Mill F* to tension filling counts from 8.00s-30.00s. Except for turning the fur slightly when running the finer numbers, the materials and methods used in supplying shuttle tension remain the same for all counts. Likewise, all loom reeds are aligned the same, and reeds are checked periodically to see if manufacturers are deviating from standard.

Nylon loops (30-lb test line) are used with the 42.00s filling at *Mill G*. Only one filling count is used, and the firm experiences 12 per cent battery refills on looms set with fork and feeler motions. No coarse reeds are used.

The cotton (20.00s, 16.00s, 12.25s, 13.50s, and 11.50s) and rayon (20.00s, 16.00s, 13.50s, 10.00s, and 11.50s) yarns at *Mill H* are tensioned with nylon loops. The same materials are used for all filling numbers, but additional loops are used for holding the coarser numbers in check. Reeds are all aligned alike.

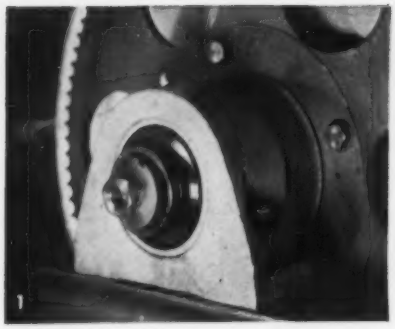
Wendell Morriss of Avondale Mills' Birmingham plant lead the weaving discussion.

A warp-out and weekly shuttle inspection is carried out at *Mill I*, which uses filling yarns from 4s to 25s. Here both nylon-loops and bristles-and-fur combinations are used, depending on the yarn count involved, but the shuttle maintenance program remains the same for all counts, and all reeds are aligned alike.

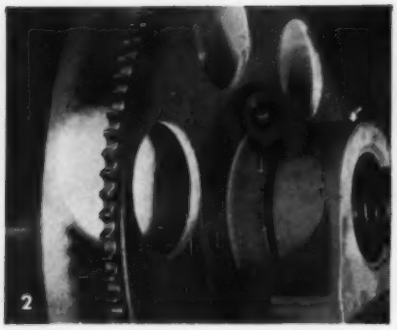
Mill J, using 3.50s to 30.00s filling yarns, uses bristles, fur, and nylon loops. Filling weights do not dictate the tensioning material used, but the maintenance system requires running with heavier bristles without fur and a deeper shuttle groove on the coarser yarns. Filling stops on a net loom hour basis run from 0.67 to 0.84. Coarse and fine reeds are aligned alike.

Weekly the fixers in *Mill K* sandpaper their shuttles and replace faulty fur and nylon loops. The filling counts ran from 4.50s to 15.50s, and the filling count determines the shuttle tensioning material used. The same maintenance program is followed for all yarn counts, and all reeds are aligned alike. Filling stops: 0.29 per loom hour for 12.00s filling; 0.31 for 15.50s; and 0.36 for 15s/2.

Only one filling number (34.50s) is run at *Mill L*. There each fixer,



Largest cylinder journals and bearings: 2-11/16 inch self-aligning ball bearings are largest ever offered and with machined labyrinth-type grease seals assure you extra long service.



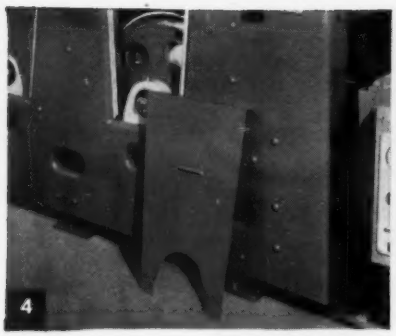
Largest sprockets: 25-inch 105-teeth sprockets mean more accurate control of cylinder surface speed and yarn tension, more efficient transmission of power, longer life.

Heaviest frame built: 7" deep at the heaviest point, 4" deep at the lightest. New patent-pending "wide-open" design gives superior access to warp and cylinders.

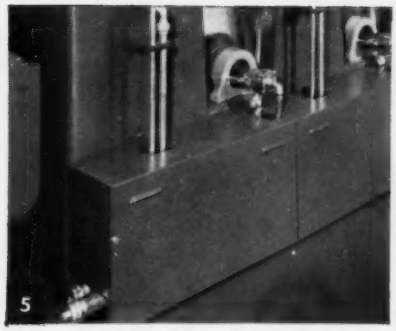
Eight good reasons why **West**

7 — The best and the simplest beam drive: Direct motor-to-spline shaft drive and spline shaft-to-loom beam arbor drive with V-belts and roller chain. No power loss through worm gear reducer. No gearmotor, no torque tube, no universal joints needed! What could be simpler and better maintained in the mill than chain and V-belt drive with parts readily available from mill supply house?

8 — High Capacity Double-Squeeze Size Box, designed to handle both light and heavy warps, now running warps of over 6,000 ends. Easy-to-clean flush side.



Removable side panels guarding sprockets are lifted out for access to warp and cylinders. No bolts, screws, or nuts to remove, to tighten or to lose! Note smooth clean side.

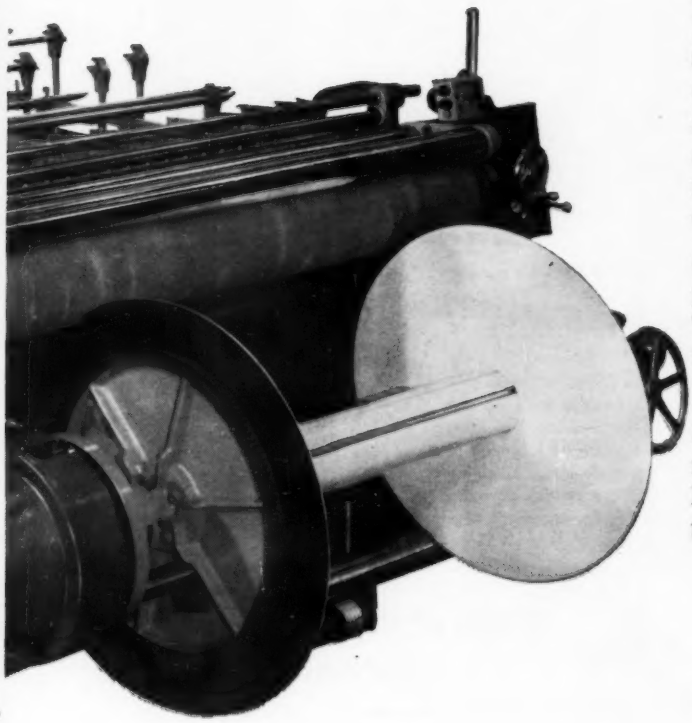


Steam and condensate manifolds are covered by a heavy metal guard for cleanliness and to protect operators from burns. Covers easy to lift off, yet strong enough to stand on.

Rugged high-speed head end can accommodate beams varying over 100 inches in width without projecting arbors (not limited to 50 inches).

Point SLASHERS

have outsold all others the last three years



IN ACTUAL SALES during the last three years West Point Foundry has sold more slashers than all other U. S. A. manufacturers combined by a margin better than 2 to 1. This is BUYING PREFERENCE expressed in hard-earned textile dollars which makes other manufacturers' claims sound empty.

WEST POINT'S PACESETTER is *not* the least expensive slasher built, but an overwhelming preference by buyers means it is the best value! This is only because of the exceptional quality features of the PACESETTER slasher.

Look at the superior quality features illustrated here; then contact your West Point Foundry representative for the complete story on the PACESETTER, the most outstanding slasher in the industry today.

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Presenting...

COLGATE SURFACE ACTIVE AGENTS

With Many Uses In Textile Wet Processing

New! COLGATE MENTOR LIQUID 35

An alkyl aryl sulphonate-type liquid detergent providing excellent detergent, wetting, penetrating, foaming and dispersing properties in hot or cold, hard, soft, alkaline or acid waters.

Used for manufacturing and finishing where dye leveling, wetting penetration and detergency are required.

Made to meet the following specifications:

Active Ingredient	35.0% Min.
Alcohol (by wt.)	5.5%
Alcohol Insoluble	3.7%
Moisture	53.8%
Specific Gravity @ 25°C.	1.080

Available in 55-gal. drums.

COLGATE ARCTIC SYNTEX 036

A 100% Liquid Non-Ionic Surface Active Agent. For Use Where An Efficient, Economical Cleaning, Scouring, Wetting, Penetrating and Emulsifying Agent Is Needed.

Compatible with anionic, cationic and other non-ionic chemical substances, ARCTIC SYNTEX 036 is not inactivated by acids, alkalies, oxidizing or reducing agents; or by most organic ions. Stable for long periods at high temperatures. Will not form salts with metal ions. Very effective at low concentrations. Stable and effective in both hard and soft water.

Available in 50-lb. pails and 52-gal. drums.

COLGATE MENTOR BEADS

Spray Dried Neutral Alkyl Aryl Synthetic Detergent. Provides Excellent Wetting, Penetrating, Foaming and Dispersing Properties in Hot or Cold, Hard, Soft, Alkaline or Acid Waters.

A high-molecular-weight alkyl aryl sulphonate-type detergent, MENTOR BEADS has many uses in textile processing including: Wetting Out, Desizing, Kier Boiling, Degumming, Rayon "Boil Off," Bleaching, Fulling, Scouring, Dyeing, Washing After Dyeing, Print Washing, Finishing, Softening, Etc.

Available in 60-lb. cases.

FREE! Latest Edition Handy Soap and Synthetic Detergent Buying Guide. Tells you the right product for every purpose. Ask your C.P. representative for a copy, or write to our Associated Products Department.

COLGATE PALMOLIVE CO. CP QUALITY PRODUCTS SINCE 1806 A SYMBOL OF QUALITY FOR OVER 130 YEARS

COLGATE-PALMOLIVE COMPANY

300 Park Avenue, New York 22, N.Y.

Atlanta 5, Ga. • Chicago 11, Ill.
Kansas City 11, Mo. • Oakland 12, Calif.

New officers and executive committee members of the Alabama Textile Operating Executives are: FRONT ROW (l to r)—Hugh Owens, William (Bill) Edwards, and Cleveland L. Adams. BACK ROW (l to r)—Burton Case, Wendell Morriss, and C. W. (Bill) Brown.

on Thursday of each week, checks the looms that are assigned to his shift on his section and: (1) sandpapers and tallows his shuttles; (2) sees that the shuttle groove is correct; (3) sees that bristles and fur are in good condition; (4) checks binder, box front, and back box plate leather for wear; (5) sees that both pickers are in good condition; (6) sees that shuttle springs are tight and are holding the quills properly; and (7) sees that nothing is cutting the reeds, lay end plates, or race boards.

Periodically the supervisors and fixers of *Mill M* check the shuttles and replace all those that are worn or giving trouble. Working from a check list, the fixer installs new shuttles, then flags the loom for the second hand who double checks settings and adjustments and, if anything is found wrong, has fixer correct it. Additionally, shuttles are inspected each shift to allow the fixers to replace missing bristles or nylon loops. The filling counts range from 2.77s to 23.00s and from 7.00/4 to 23.00/2. Nylon loops are used on the finer numbers, bristles on the coarser ones. Number 28 nylon is used in the back and middle parts of the shuttle; number 32 is used at the end of the quill. Only one shuttle maintenance program is used, and all reeds are aligned alike.

Mill N requires fixers to install nylon loops (no other material is used) while warp is out and to perform any other shuttle maintenance needed at the time. At the beginning of each shift, each fixer extracts, checks, and polishes each shuttle on his section in conjunction with checking shuttle boxing. Each day the loom fixer on one-fifth of his assigned "lay-out" looms does a complete and thorough shuttle maintenance. The filling counts range from 13s to 43s, and the amount of tensioning material is changed as the counts change. Basically, the shuttle maintenance does not change as filling counts change to lighter or heavier numbers, but quality standards now and then may require shuttle maintenance of a higher-than-normal standard. All reeds are aligned alike.

Mill O operates with bristles and fur supplying tension for its filling range of 6.25s to 27.00s. The same maintenance and the same materials are used on shuttles for all yarn counts, and no special aligning method is used for coarse reeds. The filling stops per loom hour, based on more than 100 tests over a six-month period, and for all counts, averages 0.0899.

The filling counts at *Mill P* range from 3/7s x 2/8s to 2/22 plied yarns through 2.65s to 12.00s. Bristles and fur are used for tensioning, but one stand of looms has been running for some time with nylon loops as the tensioning device. The numbers running with the loops vary from 3/7s x 1/6s through 11.00s, but they have run in molded shuttles with eyes of rather open design. Maintenance has been very moderate on the molded ones, but more difficulty is experienced with the heavier ply numbers. Tensioning is changed with yarn numbers to supply the most tension on the heaviest yarns. Filling stops per loom hour vary from an average of 0.36 to 1.12. Shuttles are maintained alike, regardless of filling count, and all reeds are aligned alike.

A portion of the day's business concerned the election of officers, and as a result: *Wendell Morriss*, Avondale Mills, Birmingham, is the new general chairman; *C. W. (Bill) Brown*, West Point Mfg. Co., Shawmut, is the new vice-general chairman; and *Cleveland L. Adams*, Head, School of Textiles, Auburn, is again secretary-treasurer for three years. The new members elected to the executive committee for the next year are: *Burton Case*, Huntsville Mfg. Co., Huntsville; *Hugh Owens*, Geneva Cotton Mills, Geneva; and *William Edwards*, Avondale Mills, Alexander City.

Tufted carpet shipments up; woven, down

■ SHIPMENTS of tufted carpets and rugs larger than 4' x 6' amounted to 79,451,000 sq yd in 1958, a new annual record 15 per cent above the previous record of 69,093,000 yards produced in 1957, according to a report which was recently published by Textile Economics Bureau, Inc.

Broad woven carpet and rug output last year was said to have amounted to 51,000,000 sq yd, a decline of 9½ per cent from the 56,400,000 produced in 1957. Included in the 1958 total were 38,000,000 sq yd of all-wool rugs and carpets and 13,000,000 yards of rugs and carpets made of other fibers (100 per cent cotton, wool-rayon and wool-nylon blends, and 100 per cent man-made fiber carpeting), the Bureau explained. It was also pointed out that the yardage of wool-nylon blended carpetings has been on the uptrend over recent periods, while the wool-rayon blends have declined.

Comparison of the annual shipments of tufted rugs and carpets (larger than 4' x 6') with the annual production of broad woven carpets and rugs for the period 1955 through 1958 may be made by referring to the accompanying tabulation of data from the Bureau's report.

RUG & CARPET OUTPUT
1955-1958
(Thousands of square yards)

Year	Tufted	Woven
1955	47,345	60,500
1956	54,228	64,000
1957	69,093	56,400
1958	79,451	51,000

NO PRODUCT SNAG

NO PRODUCTION SNAG

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Spaulding Vulcanized Fibre Trucks solved two problems for the Perry Knitting Mill, Perry, N. Y. As Harold DeGroff, Sewing Room Superintendent, puts it: "Before Spaulding, we used trucks that splintered easily, causing a hefty volume of rejects due to snagging. Also, these trucks were heavy to move, hard to load.

"A Spaulding engineer investigated the problem and aided us in the design of a high sided, open end type truck that has remained smooth and splinter-free.

"It's convenient to load and can be moved throughout our multi-level plant without tying up production."

Spaulding Materials Handling Products are strong, light-weight, permanently smooth, resistant to moisture and chemicals. They're available in a variety of standard sizes and shapes—or can be specially designed to meet a special need. Contact Spaulding about your Materials Handling Problem.

SPAULDING FIBRE COMPANY, INC.
Materials Handling Division
DOVER, NEW HAMPSHIRE

Nationalist China's textile industry, nonexistent a decade ago, prospers with U.S. help

Textiles in Nationalist China

by Don Frifield
*Hamilton Wright Organization, Inc.**

The photographs on this page were made at Jong Been Textile Co., Ltd., near Taipei, Taiwan (Formosa), a mill with 780 employees—70% of whom are women. The mill has 2,680 worsted spindles, 720 woolen spindles, and 59 looms. Its annual production is about 431,000 sq yd of fabric and 100,000 lb of knitting yarn. The mill uses wool from Australia; nylon, rayon, and other synthetic fibers from Japan, West Germany, Italy, and the U.S. About 90% of production is marketed in Taiwan; the balance goes to Korea, Iran, Malaya, and the U.S. The company was established in 1949; it specializes in homespun, flannel, and jersey.

TAIPEI, Taiwan (Formosa).—The textile industry in this remaining stronghold of Nationalist China is small by any U. S. standards, but its growth has been rapid and its promise is bright. On this rapidly industrializing island only 100 miles east of the Communist-held China mainland, traditional Chinese skills are being put to work with modern machinery and modern methods.

While Japan leads the Orient in textiles as in most other manufactures, and while Communist China is seriously threatening the traditional south Asian market for Japanese cotton goods, Taiwan is still in the stage where satisfying the domestic demand of her 10 million people is her primary goal.

It should be pointed out here that Communist China, far from even trying to satisfy domestic demand, is aiming at export markets only to embarrass Japan with "dumped" goods at impossibly low prices—made possible only by enforced labor and the

*This firm is retained by the government of Nationalist China.

Mr. J. H. Daughdrill, President
Kingston Mills, Cartersville, Ga.
Manufacturers of Kingston Carpets **REPORTS:**

Twisting Cost DOWN 33%

Winding Cost DOWN 65%

Winder Production Up 300%

Tufting Efficiency UP 25%

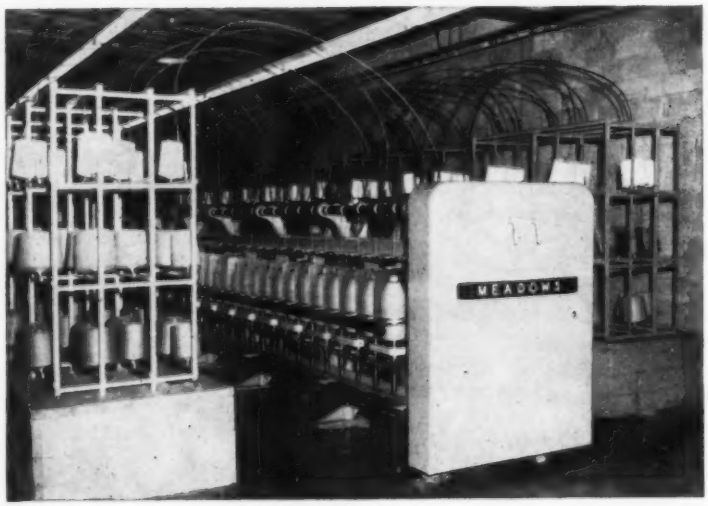
After installing Meadows Anti-Friction Twisters.

And, of course, the quality of the finished carpeting is improved as a result of the knotless yarn produced on Meadows Large Ring Twisters.

MEADOWS

Anti-friction

TWISTERS



Meadows Twisters run combed, carded or filament sales yarn; carpet yarn; paper; tire cord (ply or cable). The same basic twister, with minor alterations, can be used to handle any or all of these. Bobbins build from 8 to 13 inches. Gauge and ring size as you require, from the smallest to the largest.

Meadows Twisters operate at higher speeds with less horsepower and maintenance, due to the anti-friction features.
Meadows-equipped mills turn out yarn of superior quality because of smoother running and fewer ends down, and report many other worth-while economies.

Bring your twisting problems to us!

Visit us at 1190 Astor Ave., S. W.
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Write us at P. O. Box 10876

Meadows Manufacturing Co.
Established 1931
Atlanta 10, Georgia, U. S. A.

fact that her cotton goods are actually sold at less than cost. Thus harassed, Japan is supposed to veer closer to Communist China by increased pressures for trade—so Peiping hopes.

Size of Taiwan's Textile Industry. The industry employs about 60,000 people, consists of 16 cotton spinning mills, about 200 weaving mills, 7 worsted and woolen mills, 3 gunny-bag mills, 3 ramie mills, 9 synthetic fiber spinning mills, 5 silk weaving mills, 13 dyeing and printing mills, and 4 finishing plants. The largest cotton mill, the Da-ching Cotton Mills Corp., has 30,000 spindles. The largest woolen mill, the Jong Been Textile Corp., has 3,400 spindles. The largest staple-fiber spinning mill, the Hsin-kong Textile Corp., has 10,000 spindles. The largest weaving mill has 500 looms.

If one considered all the tiny workshops producing textiles in Taiwan, there would be more than 1,500 textile plants on the island. Altogether they provide 1/6 of Taiwan's total manufactures, close to $70 million in production annually, of which nearly $3 million is exported. Cotton textiles comprise 75% of these production values.

The industry was nonexistent until 1950, when 50,000 spindles from the U. S., Japan, and from the old textile mills on the China mainland became the nucleus of the new textile industry here.

Today there are 240,356 cotton-spinning spindles, 15,549 wool-spinning spindles, and 58,188 staple-fiber spinning spindles on Taiwan. In 1958 some 14,600 cotton looms turned out 152,550 bales of fabric, while the island's woolen looms produced 1,138,000 pounds—this in addition to 5,713,017 pounds of synthetic fabric. Cotton fabric production last year was about 203 million square yards, while woolen fabric production amounted to 1,190,000 square yards.

Exports and Imports. Taiwan's textile exports are small by American standards, but they serve to tighten relations with the other countries of free east Asia. Last year's cotton sales were $1,462,000, mostly to Hong Kong, Viet Nam, Thailand, Singapore, and the U. S.

Wool exports, almost entirely to Hong Kong and Middle Eastern countries, totaled $131,000. Staple fabric sales, totaling $471,000, went to Hong Kong, South Korea, and Viet Nam.

The goal for 1959 is $5 million in total textile exports, more than double 1958's total of $2,064,000.

In 1957 Taiwan spent $18 million to import raw cotton, $2 million for wool, $1.7 million for rayon and artificial fibers. She produces but a fraction of her own cotton, but her 44,000 pounds of silk production were almost enough to fill the needs of the domestic silk mills.

Machinery. American machinery, comprising about ⅓ of the total, can be seen almost everywhere in Taiwan's textile mills. The remainder is either of local manufacture or from Japan. Textile manufacturers have bought the machinery with funds lent them by the Nationalist Chinese government, who in turn received the money through U. S. economic aid.

The expenditure of aid funds in Taiwan is supervised by the Council for U. S. Aid, composed of top American and Chinese experts who decide what money is to be used for what. In the textile industry here, unlike most other industries, dollars have been much more necessary than technical advice—for textile-making is an ancient Chinese skill. American aid in 1958 amounted to $11,850,000; this year it is budgeted at $20,000,000.

Some of the American machinery now in use on Taiwan: spinning equipment from Saco-Lowell Shops, looms from Crompton & Knowles Corp., worsted machinery from Whitin Machine Works, and winders from Foster Machine Co. and Universal Winding Co.

Industry's Importance. The general economy of Taiwan, much buttressed by such American technical and financial aid, has expanded at the rate of 9% per year since 1953. The earnings of Taiwan's people are figured at $94 per capita, second in the Orient only to Japan.

The influx of two million of China's people from the Communist-dominated mainland infused Taiwan with strong managerial and technical skills.

The importance of Nationalist China's textile industry goes beyond any dollars-and-cents evaluation, according to American experts on the island. They point out that a healthy, expanding textile industry will serve to make Nationalist China not only less dependent on U. S. aid funds, but will also stimulate her own people to greater efforts in other industries.

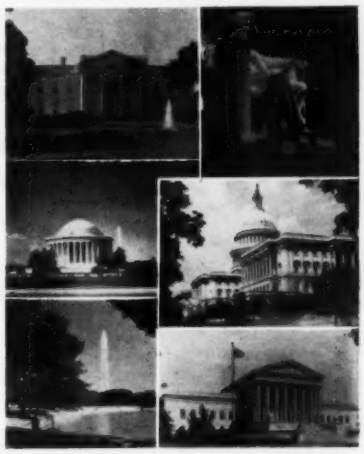
As it is, Taiwan is the only part of China still aligned with the free world, a rallying point for the loyalties of nearly 15 million Chinese outside China itself and for hundreds of millions of Chinese under the Communist yoke.

As such, Taiwan is—like it or not—a showcase of non-Communist Asia, and her success or failure in raising the productivity and income of her people can have widespread political repercussions in the "rim" countries lying along the borders of Communist China.

Plan now to attend the

AATCC CONVENTION

and Wet Process Exhibit



Washington, D. C.

October 7-10, 1959

#10 of a series

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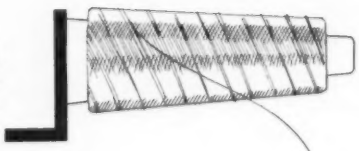
For maximum success with the new yarns, you will need to make a few simple adjustments. For example: Vertical creeling of textured filament yarns can lead to a considerable amount of sloughing off if proper precautions are not taken.

Because the fiber ends are essentially smooth, they will slide down the body of the package when the yarn is relaxed. As the machine starts up again and the slack is eliminated, the cone may be lifted off the arbor. Here are two easy ways to avoid this problem:

- **Place a piece of carpet under the yarn package with the bottom of the cone passing through the carpet and the coned yarn resting on the pile of the carpet. Thus, the relaxed yarn will rest on the carpet and will not unseat the cone.**

or



- **Re-install the arbors so that the cones will be horizontal rather than vertical. The relaxed yarn will then run freely from the package without sloughing. Post-tensioning devices will help control uniform yarn delivery**

We will be happy to help you in adapting Textured Caprolan* to your product lines for best possible results. Our technical service, end-use development and fiber application laboratory staffs are always available. Call us any time.

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1958 broad woven fabric output 7.2 per cent below 10-year average

■ UNITED STATES production of cotton, wool, man-made fiber, and silk textiles in 1958 totaled 11,607,009,000 linear yards, excluding automobile tire fabric, according to the summary of apparel fiber textiles shown in the accompanying "Ten Years of Broad Woven Fabrics" chart which was recently made available by The Association of Cotton Textile Merchants of New York.

The total is 4.1 per cent less than the quantity of broadwoven goods made in 1957, and is down 7.2 per cent from the 12,507,715,000 average production of the 1948-57 decade.

The year 1958 was marked by continued declines in production of goods of the natural fibers, but by a reversal after heavy prior declines in rayon/acetate fabrics. The newer man-made fibers were down slightly after continuous annual gains in prior years.

Cotton goods production was off 5.9 per cent from 1957 and 13.0 per cent from the peak post-war year 1956. Among the major cotton goods divisions only fine yarn goods and the "all other" classification showed gains from 1957. Towels and toweling were at a low since 1955; print cloth yarn goods at a low since 1949. Record lows for this series of figures dating from 1941 were set in duck, sheeting yarn goods, colored yarn, and napped fabrics.

Rayon/acetate broad woven goods for 1958 were up 12.5 per cent in the year, although 32.0 per cent below the peak year 1950 for these fabrics. All major divisions here showed gains for the year, the most important being a substantial reversal in 100 per cent spun yarn fabrics, while a new high was set for the pile, upholstery, drapery, tapestry, and tie fabrics category.

In the separate group of other man-made fibers including nylon, acrylic, polyester, saran, polyethylene, and textile glass fabrics, production was 681,182,000 yards, second only to the record 776,013,000 in 1957.

Per Capita Output. The country's textile production in relation to population dropped to a new low of 66.68 yards in the year, a loss of more than 10 yards per capita in two years, and almost 10 yards less than it was in pre-war 1939. The per capita figures, not shown on the chart, are given herewith, and are based on population of the continental United States without export-import adjustment:

PER CAPITA U. S. PRODUCTION OF BROAD WOVEN GOODS (Linear Yards)

1937 est.	78.64
1939 est.	76.66
1941	94.93
1942	98.56
1943	93.36
1944	84.97
1945	77.42
1946	81.50
1947	85.84
1948	84.60
1949	73.22
1950	86.30
1951	83.49
1952	77.43
1953	81.08
1954	77.07
1955	79.35
1956	76.89
1957	70.69
1958	66.68*

*Preliminary

Ten Years of Broad Woven Fabrics

Prepared by The Association of Cotton Textile Merchants of New York from reports of the Bureau of the Census

	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958
	THOUSANDS OF LINEAR YARDS									PRELIMINARY
Cotton Broad Woven Goods (except tire fabrics) Total Production	8,406,351	10,012,686	10,135,969	9,514,732	10,203,037	9,890,948	10,171,062	10,317,071	9,539,312	8,974,865
Duck and allied fabrics	216,816	248,890	362,777	366,081	263,223	239,819	242,087	255,471	219,692	201,669
Sheeting and allied coarse and medium yarn fabrics	2,355,524	2,736,691	2,836,253	2,416,939	2,556,855	2,493,582	2,585,636	2,638,616	2,472,306	2,278,945
Print cloth yarn fabrics	3,158,320	3,663,449	3,709,429	3,638293	3,956,483	4,039,169	3,967,718	3,888,122	3,736,448	3,333,203
Colored yarn fabrics	653,162	860,318	779,053	827,362	862,816	738,617	698,601	625,328	533,051	480,866
Fine cotton fabrics	1,009,935	1,218,381	1,233,133	1,112,721	1,307,926	1,244,336	1,376,513	1,517,982	1,363,315	1,454,610
Napped fabrics, blankets, blanketing	328,737	398,614	408,682	297,790	290,316	233,143	240,681	240,844	209,200	195,956
Towels, toweling and dish cloths	349,788	453,662	421,607	428,358	475,086	455,088	502,298	562,638	540,739	536,207
Other woven cotton fabrics, specialties	334,069	432,681	385,035	427,188	490,330	447,194	557,499	588,070	464,161	493,409
Rayon and Acetate Broad Woven Fabrics, Total	1,957,105	2,406,205	2,083,836	1,851,673	1,903,233	1,730,904	1,928,162	1,626,047	1,454,037	1,636,139
100 per cent filament rayon and/or acetate fabrics	1,296,675	1,601,282	1,296,967	986,702	1,051,844	848,310	887,373	760,113	687,493	694,647
100 per cent spun rayon and/or acetate fabrics	340,603	434,085	407,601	407,273	442,129	445,485	528,185	351,474	281,106	420,027
Combination filament and spun rayon and/or acetate fabrics	184,533	202,450	190,238	227,074	238,594	218,876	209,184	207,776	207,404	222,021
Pile, upholstery, drapery, tapestry and tie fabrics	29,860	37,763	36,496	50,119	63,442	87,906	118,407	114,889	137,273	146,875
All other rayon and/or acetate mixtures including blanketing	105,434	130,625	152,534	180,505	207,224	230,327	285,013	261,795	240,761	252,591
Other Man Made Fiber Fabrics*	129,364	171,974	265,375	400,634	463,954	558,631	629,197	602,229	776,013	681,182
Woolen and Worsted Woven Goods	414,382	470,513	375,400	351,359	333,914	284,231	317,586	324,358	290,786	273,290
Silk, Part Silk, Other Fabrics†	15,900	29,338	26,461	41,998	38,065	53,325	69,872	61,327	41,570	41,513
Total Production of Broad Woven Goods (except tire cord and fabric)	10,923,102	13,090,716	12,887,241	12,160,396	12,944,203	12,518,039	13,115,879	12,931,682	12,101,718	11,607,009
	THOUSANDS OF POUNDS									
Tire Cord and Fabrics, Total	435,401	523,033	603,913	530,980	521,007	418,338	524,388	449,479	437,546	372,973
Cotton tire cord and fabrics	155,923	226,050	289,160	139,001	73,216	59,890	68,206	51,419	42,281	34,982
Man-made tire cords and fabrics	279,478	296,983	314,753	391,979	447,791	358,448	456,182	398,060	395,265	337,991

*Includes nylon, acrylic, polyester, saran and polyethylene, and textile glass fiber fabrics and mixtures.

†Silk and silk mixtures through 1953; includes paper yarn and miscellaneous as follows: 1954, 10,917; 1955, 27,165; 1956, 20,296; 1957, 13,877; 1958, 16,747. Data from 1956 not exactly comparable with earlier years.

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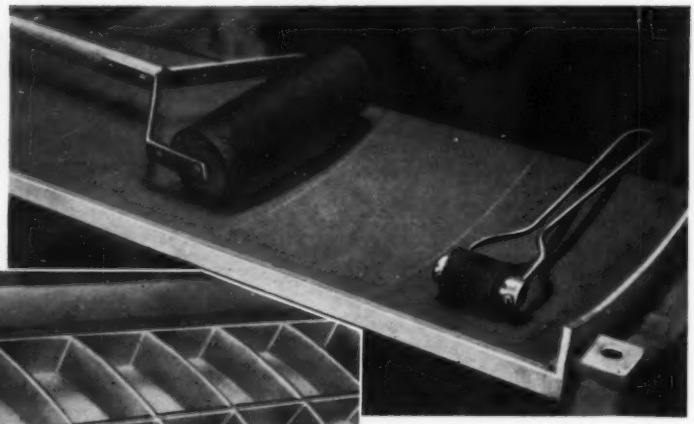

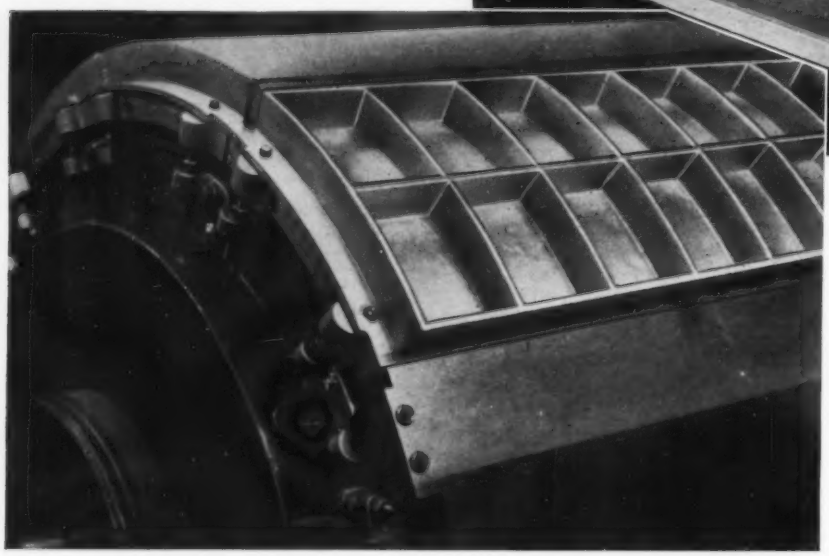

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Booth Gran-O-Top Granular Card Conversion is a complete conversion unit, including Gran-O-Top Sections, all make-up pieces, special SRRL Lickerin Cover and Pre-Opener Roll. Manufactured in Charlotte by The Carolina Machinery Company, Booth Gran-O-Top Conversion Units will soon be available to fit all current 40" Flat Top Cards.

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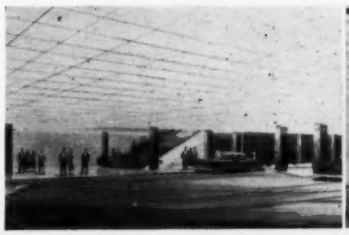
Booth

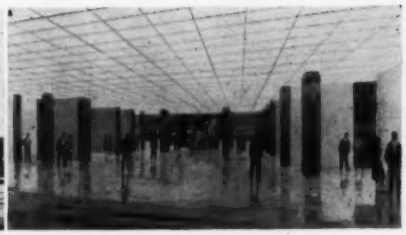
More space for more exhibitors at 1960 Atlantic City Show

■ THE 1960 American Textile Machinery Exhibition, to be held in Atlantic City, N. J., May 23-27, will surpass any textile machinery show ever held anywhere, according to the American Textile Machinery Association, the sponsoring organization.

Approximately 300,000 sq ft of exhibition space will be available for suppliers to the industry to exhibit the latest equipment and supplies, 104,000 sq ft more than that utilized for the 1954 show.

The additional exhibition space, located underneath Convention Hall in the area formerly used as a driveway, is only one phase of a $3 million Auditorium expansion and modernization program which is currently under way.





A tunnel to accommodate double-deck buses, trucks, and private cars will circle the Boardwalk end of the building (underneath the Boardwalk) and permit the discharge of passengers into a new, colorful lobby in the lower level (see accompanying photos) from which visitors can enter into the lower exhibit hall or proceed by escalator to the main lobby, also being renovated.

The main lobby is being widened by 50 ft and completely redecorated. The registration area is being enlarged, and new telephone room, new check room, and new general offices provided.

It is estimated that there will be 450 exhibitors at the 1960 show, compared with 387 in 1954.

Weaving with a sewing machine *(from page 102)*

a simple spreader or guider needle, similar to those used in warp knitting. In this newly evolved stitching system the settings are not as critical as on other chain stitch sewing machines. Another significant feature of the unit is that the new lock needle can take an inferior quality sewing thread without lowering efficiency.

As mentioned, yarn is supplied from creels, and filling, which is used much faster than warp or sewing yarn, is supplied from a magazine creel in which the cones are pig-tailed. Since the yarn is used as fast as it enters the machine, there is no need for warp sizing.

The filling is inserted as a sheet of 70 ends. A special traversing device takes the sheet of threads across the machine to a set of pins on a continuous flexible belt. The ends are then taken around these pins, which hold them as the sheet is conveyed down into the stitching zone.

These belts are continuous, and one is fitted on each side of the machine. After the filling yarn has been stitched to the warp, the pins disengage and pass upward to pick up the next set of filling threads.

The Fabric. In the Malimo fabric warp and filling are joined together by a modified form of stitching, arranged to run up the fabric in a zig-zag fashion. This means that the sewing thread of one row of stitches can be used to lock the loops of another, and vice versa.

Yarn slippage is overcome by having the filling laid not at right angles to the warp, but at a slight angle. In such a structure *(Fig. 1)* the sewing thread penetrates the filling yarn at intervals and so prevents thread slippage. This is the construction used in the Malimo fabrics which are selling in East Germany today.

The present machines running in East Germany are limited to making fabrics of a maximum width of about 18 inches, although it is planned to increase this in later machines.

Commercial Production. The first machine to be installed is running at the plant of VEB Cunnersdorfer Wirkwarenfabrik Annaberg/Erzgeb., and this firm has found that filling can be inserted into the machine at almost any rate, the present speed limitation on production being set by the sewing system.

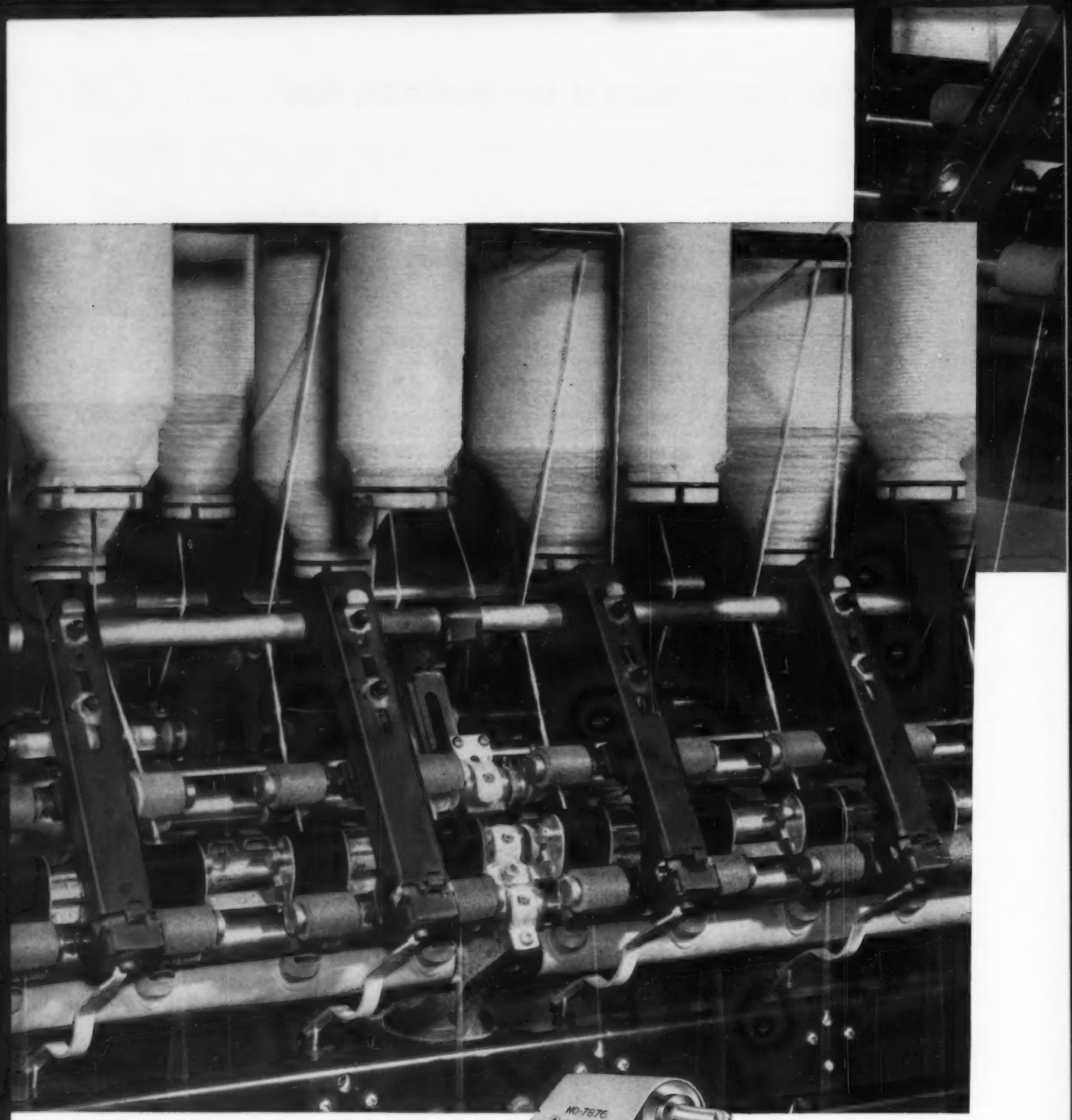
They are sewing at 1,300 stitches/minute and as each stitch is about 0.04 inch long the cloth is being produced at a rate of about 170 yards per hour.

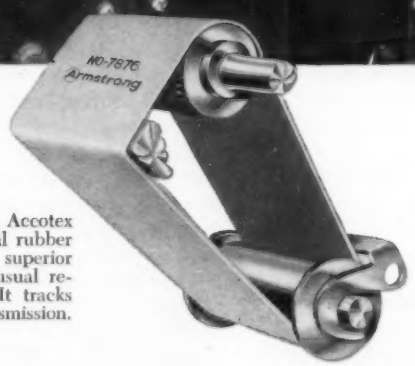
It has been found that to make the most effective and satisfactory fabrics the speed of filling insertion should not be exactly divisible by the rate of stitching; for the commercially produced fabrics there has been an insertion of filling at a rate of 3.2 ends per stitch. So with a stitching speed of 1,300 spm the rate of production is 4,160 picks per minute.

Fabrics so far produced have been made from inexpensive cotton yarns. Warp and filling have been made with a 7s vigogne (waste blend) yarn, the sewing with 12s.

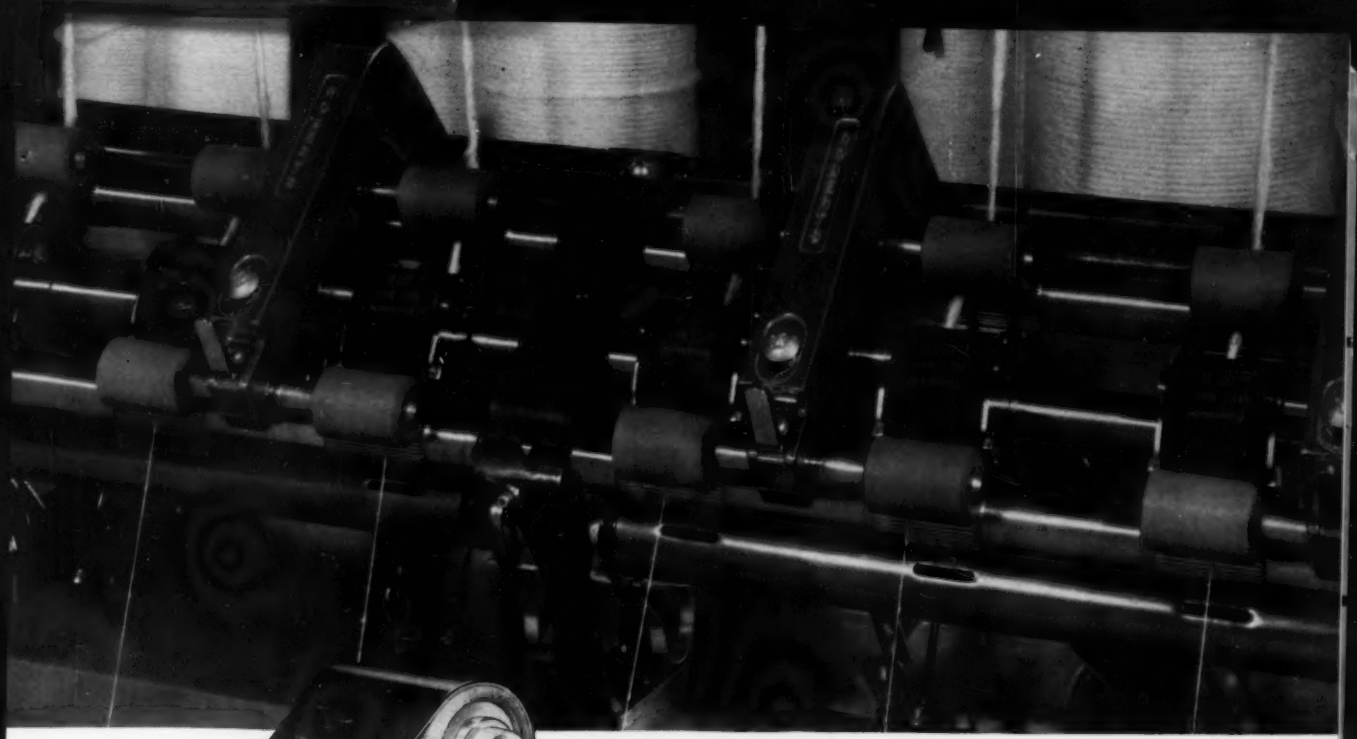
The narrow fabric made on this new machine, which is built by VEB Tullmaschinenbau Karl-Marx-Stadt, is being used mainly for towels, but it is pointed out by the makers that it could also find application for tea towels, ironing board covers, industrial fabrics and many other applications.

It remains to be seen how well the products of this novel machine will be accepted in a free economy where buyer resistance has to be overcome, although a low price will no doubt do much to overcome initial difficulties. It would appear, though, that the patterning possibilities of such a cloth will be severely limited and probably the only really satisfactory form of pattern will be obtained by printing the cloth made on this extremely novel machine.





For long-apron systems, Armstrong Accotex NO-7876 is recommended. Two special rubber compounds give it super-flexibility, superior fiber handling characteristics, and unusual resistance to flex cracking and ozone. It tracks accurately and gives full power transmission.



For close-pin double-apron systems, use Accotex NO-7075. This black-and-white apron pioneered the two-compound principle in aprons. Special synthetic rubber compounds give it smooth drafting properties and good resistance to abrasion and cracking.

On any drafting system get superior yarn control and long service with Accotex Aprons

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These aprons have the right characteristics for consistently good performance on any frame . . . with any fiber. They give you the smooth drafting action and superior fiber control so necessary to high production of strong, uniform yarn.

The patented construction of Accotex Aprons also contributes to their performance. A strong cord interliner eliminates stretching and curling, maintaining the apron's dimensional stability and assuring smooth operation at nose bar or pin.

If you're not already using Accotex Aprons, ask your Armstrong man to arrange a test. Or write for more information to Armstrong Cork Company, 6407 Ivy Street, Lancaster, Pennsylvania.

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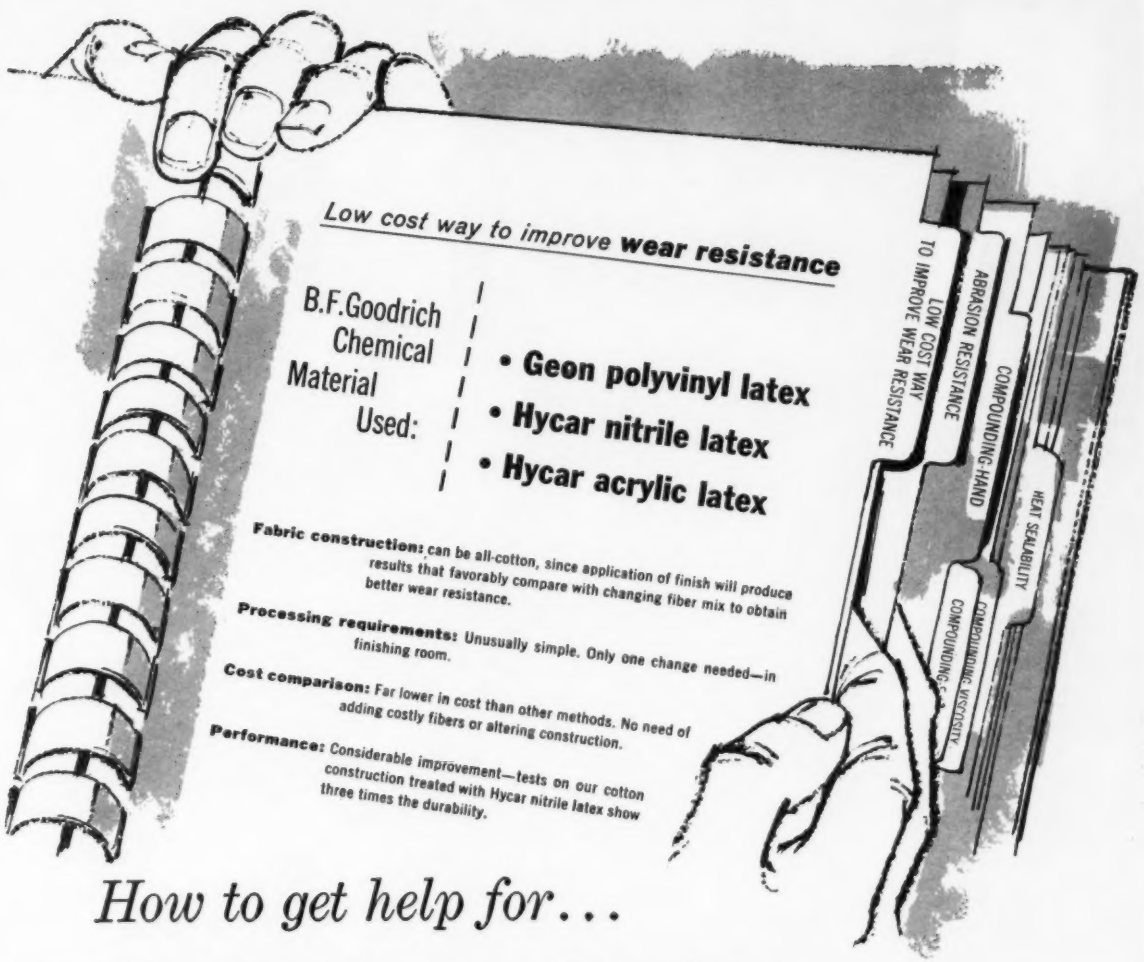
News about

B.F.Goodrich Chemical *raw materials*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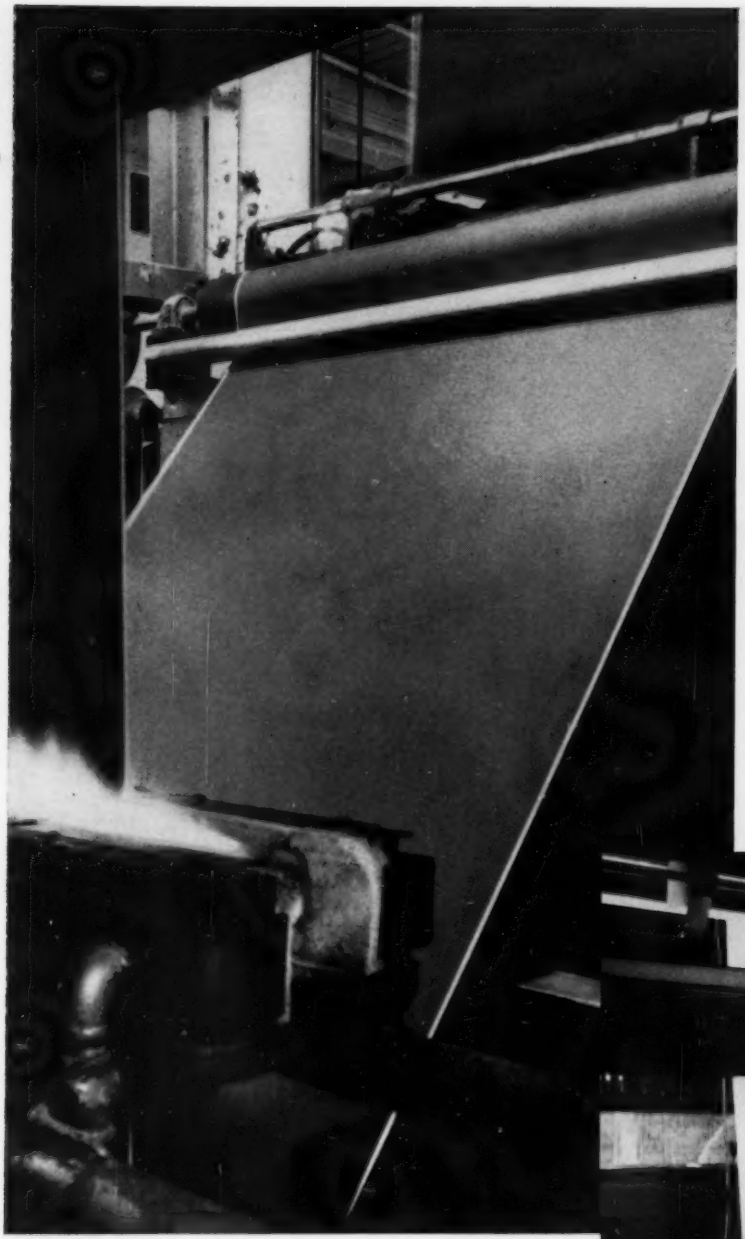

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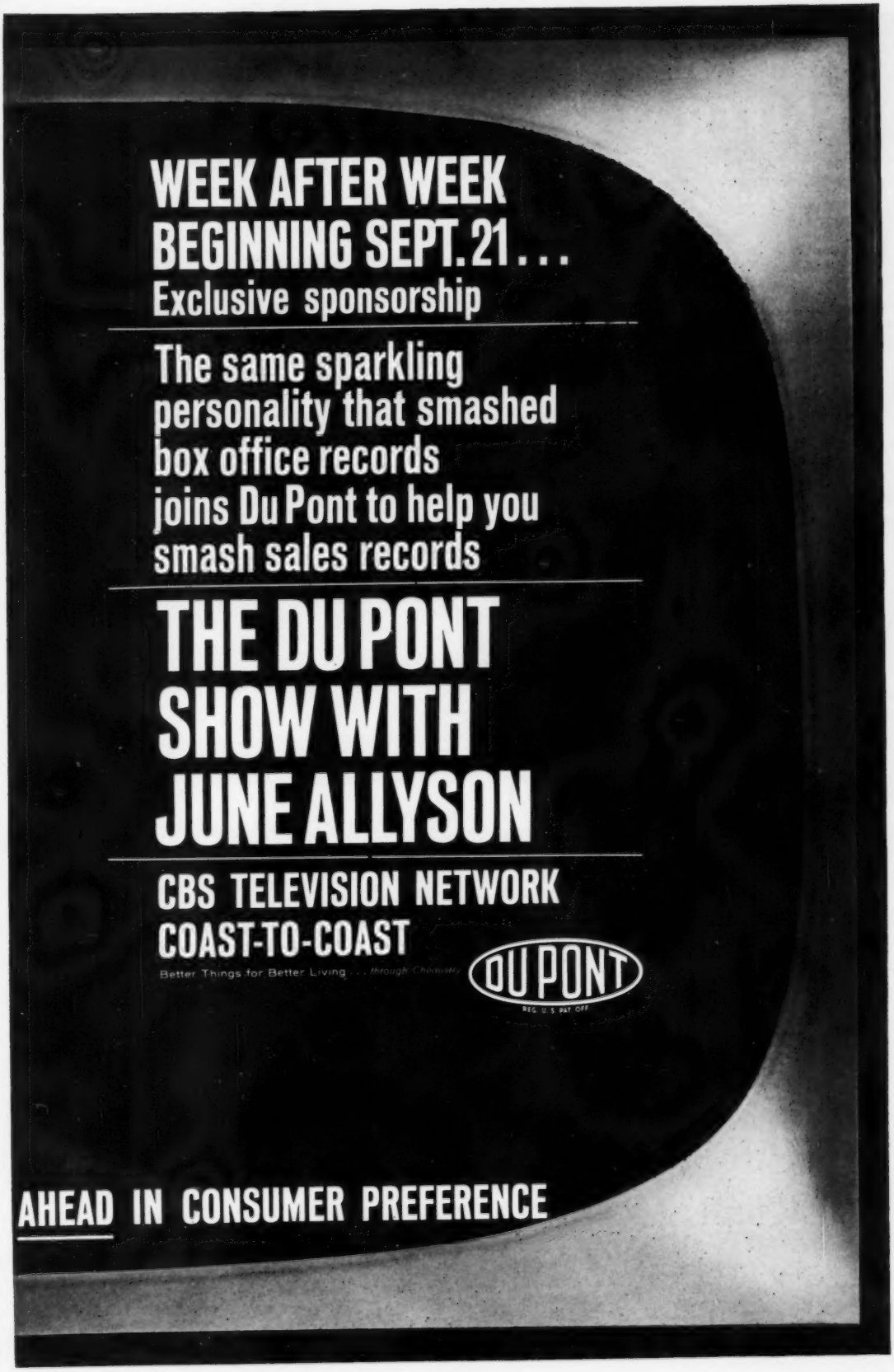
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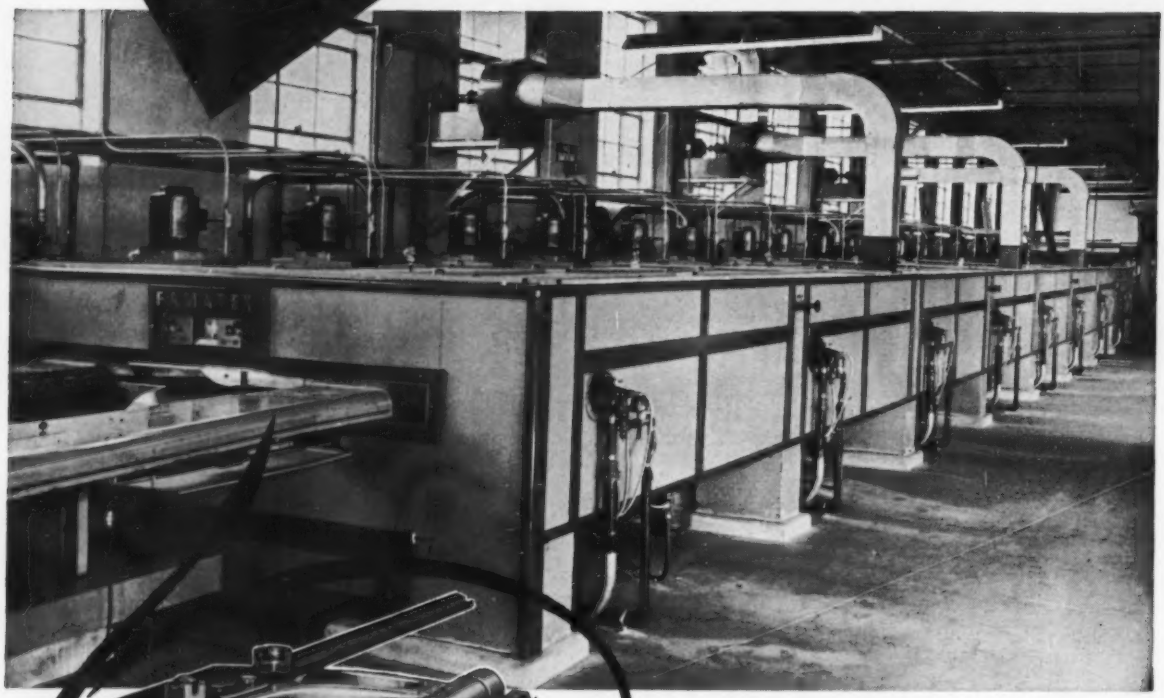

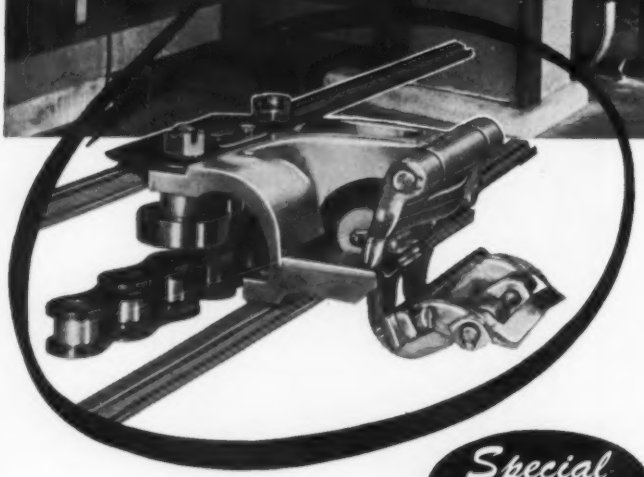

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KNITTING SECTION

Hosiery makers optimistic

Industry's position best in many years, NAHM told

Staff report

APPROXIMATELY 400 hosiery industry representatives registered at the 22nd Hosiery Industry Conference held in Atlantic City in conjunction with the biennial Knitting Arts Exhibition.

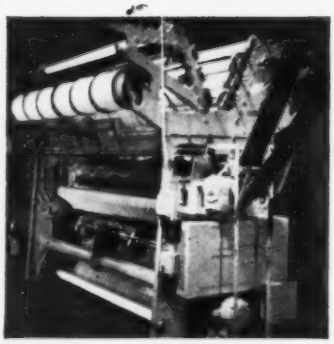
Those attending meetings of the National Association of Hosiery Manufacturers heard Nathan M. Ayers, retiring chairman of the board, express an optimistic outlook for the future of the industry. Mr. Ayers told the group that the hosiery industry is now in a better position to profit from the favorable business climate than it has been in many years.

"By all outward appearances, the year 1959 should be good, measured both by the yardstick of volume and profits," he said.

The industry problems of underconsumption and lack of product demand can be cured only by means of the proper promotion and marketing of our products, he indicated.

A highlight of the meeting was a discussion on the meaning and implications of the Textile Fiber Products Identification Act as it

About 400 representatives of the hosiery and allied industries attended NAHM's annual meeting and the Hosiery Industry Conference.



There's no limit to the lace patterns with the NEW KIDDE 24 BAR RASCHEL KNITTER

Look at the lace in the picture. Every one of those intricate and varied patterns can be made on a single machine . . . Kidde's new 24 bar knitter. Look again at the quality of the lace . . . at the fine detail and the clear outlining of the pattern. That's quality lace turned out at moderate cost.

This new addition to Kidde's line of Raschel knitters is built to operate with 24 bars . . . but can be used with 14 or 18 for less intricate patterns. It turns the lace out fast, too . . . up to 300 courses per minute.

Like all Kidde machines, the new 24 bar knitter is simple, accessible and easy to work on. Equally important, it is ruggedly built to withstand round-the-clock, high speed operation. Write to Kidde for full information.

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affects those in the hosiery industry. More clarification of the requirements of this act is awaited by the industry.

The Du Pont Co. will promote the Better Hosiery Council's Seal of Approval to the consumer, and The Chemstrand Corp. indicated intentions to help in the promotion. It was reported that several of the large chain stores already signaled their intention to participate in the Seal Program by requesting Seals on much of the hosiery they purchase and by promoting Seal-bearing socks and anklets.

W. F. Williamson, president of the association, emphasized the optimistic note for the future.

"We have every hope during the year for good business and in better brackets. Our productive capacity is getting closer and closer in balance with demand and we, unlike others, have no past mistakes, inventorywise, to liquidate.

"We now approach a new boom era from a position of strength. This time we are able and willing, I believe, to exploit our opportunities as we haven't been either able or willing to do before," Mr. Williamson said.

"Hosiery Sales Can Boom," was the title of a paper based on a consumer survey by *Life* and presented by Bert Lange. The survey revealed a tremendous potential market soon to be available to the hosiery industry.

Tips for dyeing and finishing sweaters of crimp-bulked nylon

■ MANUFACTURERS of sweaters knitted with crimp-bulked nylon filament yarns (those produced by the stuffer box crimping technique) will find in a recently published Du Pont bulletin* many helpful suggestions for the wet processing of these garments. Among them are the following:

Developing Bulk. Garments of crimp-bulked nylon yarns must first be allowed to develop bulk. This is done by a specific relaxing operation in which there is usually a 25% to 35% contraction in fabric area.

To develop bulk, knitted transfer bodies (in strips or singles) and full-fashioned sweaters (after looping and cup seaming) are wet out thoroughly and scoured at 80 to 90 F with 1% "Alkanol" HCS surface active agent. Sweaters are not bagged for this operation.

If the goods are dirty or spotted, they can be given an additional scouring for ten minutes at 120 F in a bath containing 2% "Alkanol" HCS and 2% tetrasodium pyrophosphate.

The goods are then rinsed thoroughly, centrifuged, and tumble dried at 140 F to 170 F. The lower temperature is used with jersey knit fabrics.

Tubular goods are given a light steaming and then framed to straighten and remove any wrinkles before they are cut and sewn.

Pressing. Full-fashioned sweaters and tubular knit sweaters which have been cut and sewn are steam-pressed to remove all wrinkles. Pressing should be done with the buck down but not locked. In some cases, drycleaning is desirable to remove tenaciously held substances. This is done after sewing, but before pressing.

The size and shape of the garment is determined in knitting and cutting and cannot be altered by pressing.

Heat-Setting. Heat-setting under the proper conditions will (1) give the sweaters stability, (2) improve the hand and texture of the garment, (3) minimize wrinkling during dyeing, and (4) improve the dyeability.

Bulked nylon sweaters can be heat-set in an autoclave or in nylon preboarding equipment at 25 to 30 psi (266 to 274 F) for 6 to 15 minutes. Where lower pressures and temperatures are used, a longer setting time is required.

A typical vacuum-steam cycle is:

1. Vacuum (28" of mercury)—five to six minutes
2. Steam (28 psi gauge)—two minutes at pressure
3. Return almost to atmospheric pressure (no vacuum)—one-half to one minute normally required
4. Steam (28 psi gauge)—two minutes at pressure
5. Return almost to atmospheric pressure (no vacuum)—one-half to one minute normally required
6. Steam (28 psi gauge)—two minutes at pressure
7. Return almost to atmospheric pressure (no vacuum)—one-half to one minute normally required
8. Steam (28 psi gauge)—five to ten minutes at pressure
9. Vacuum (28" of mercury)—six minutes

For setting, the garments can be laid flat or hung over cloth-covered metal bars; whichever method is used, garments should be completely free of wrinkles.

Preparation for Dyeing. After setting, the sweaters are placed in regular dye bags and dyed in paddle or rotary machines. Bags constructed of filament yarn are preferred to prevent fabric distortion during dyeing. The bags should be neither overloaded nor underloaded.

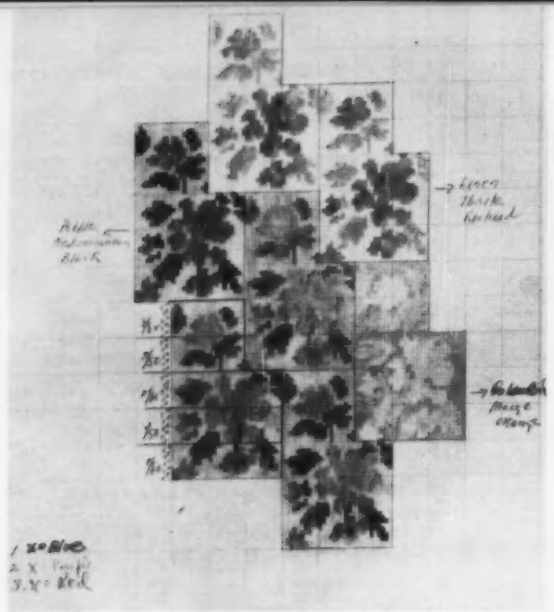
If the sweaters have become soiled in heat-setting, they can be prepared for dyeing by scouring a second time with 2% "Alkanol" HCS and 2% tetrasodium pyrophosphate at 180 F for 30 minutes and rinsing afterwards.

Dyeing. Acid dyes generally are used for medium and dark shades. For the most part they show good fastness properties on nylon, but they have a tendency to accentuate streaks and "tiger stripes." However, by careful dye selection and use of recommended dyeing procedures [in the bulletin], it is possible to minimize many of these undesirable irregularities.

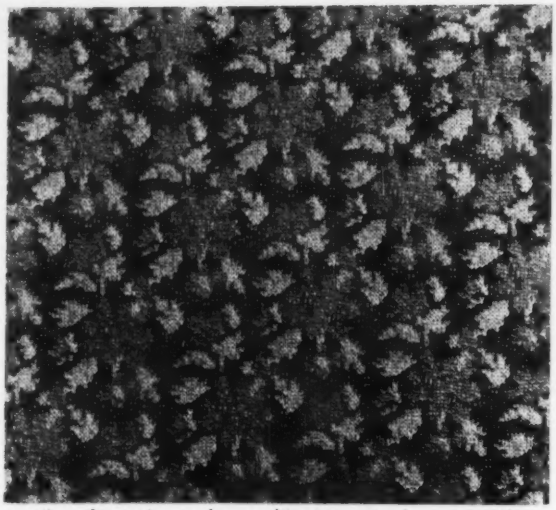
Disperse dyes transfer well on nylon and minimize streaks or "tiger stripes." However, these dyes are generally used for light shades and where maximum fastness to washing and crocking is not required.

Finishing. In general, a pleasing hand and adequate static protection are obtained on these garments by the application of 1 to 2% of a cationic softening agent, such as "Avitex NA softener. This softener is usually applied at 120 F in the final rinse of the dyeing machine. Sweaters are then centrifuged and dried in a tumble-type dryer at 140 to 170 F. After dyeing and finishing, the garments are ready for final pressing and packaging.

*Bulletin N-116, "Dyeing and Finishing Sweaters of Crimp-Bulked Du Pont Nylon," by Technical Service Section, Textile Fibers Department, E. I. du Pont de Nemours & Co. (Inc.), Wilmington, Del.



In designing, consideration must be given to the circular rise of the fabric in knitting, to prevent sharp diagonals and other unpleasing effects. The floral design above has been drawn in color, representing the various color combinations. Graph paper with 20 squares to the inch is used. The fabric is shown at the right above, after resin treatment, about the same size as the painted design.



Styling cotton knits for resin treatment

William Heller Co. expands to strengthen its position in the knitted outerwear field

Staff prepared Exclusive

IN RECENT years, the William Heller Co. has taken major steps to strengthen its position as a diversified knitter and finisher of outerwear fabrics. In an expansion program at the Woonsocket, R. I., knitting plant, modern spinning equipment has been installed to supply most of the needs of the jersey fabrics division, long the life-blood of the company. The expanded facilities also include equipment for processing man-made fibers into a range of blended and textured yarns.

Simultaneously, several coordinated moves were made to enter the growing market for resin-treated cotton knits. For greater latitude in designing colored Jacquards, the plant's 32-feed circular jersey machines were equipped with 130-cut pattern wheels, the first in the industry to be so equipped. The larger pattern wheel makes possible more natural-looking floral patterrns, and offers a broader range of abstract patterns as well, to which the dressgoods trade has been accustomed from printers of woven fabrics. And for proper application of resin finishes to the tubular fabric, modern padding and curing equipment has been installed at the company's Pawtuxet Valley Dyeing Co., at Phenix, R. I.

Fabrics are styled for spring and fall in plains, and in two- and three-color Jacquard designs. There is also a line of roller prints each season, printed by commission finishers.

For dresswear, a 30s/2 cotton yarn is almost exclusively used. It gives a much fuller hand than an 18s/1, which finds most usage in blousewear and shirtings. Both of these yarns are supplied by commission dyers to Heller in more than 50 shades, ranging from pastels through deeps, to offer infinite color combinations.

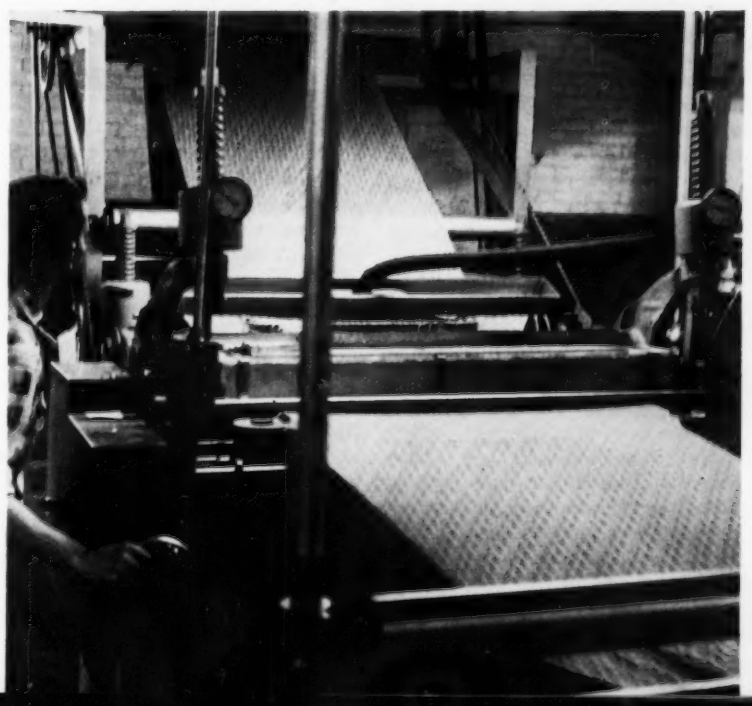
As in styling other fabrics, end usage and the practical considerations of production are kept uppermost in mind. While many pleasing textures and fabric constructions are possible, not all of them contribute to satisfactory fabric performance, affecting such important properties as shape retention and dimensional stability, despite resin treatment. And needless to say, designing colored patterns must also take into consideration existing dress fashions and the restrictions imposed by garment manufacture.

Birth of a Design. The actual process of creation which results in an original design is perhaps too complex to be described simply.

From the graph paper design, an expanded layout is made for guidance of wheel jacker and knitter. Each 32-feed machine at Heller has been equipped with 130-cut pattern wheels, which give larger repeats. Stylist Bill Rynn, left, goes over design with a knitter.

While imagination plays an important part, it must be disciplined to a degree if the design is to be practicable.

Often a design is simply a modification of an existing one that is selling well, or it may be a modification of a basic design that continues to meet with consumer acceptance year after year. The Heller line also includes a number of designs each season which are adaptations of trends in modern painting. *(Continued next page)*



Principal reason for the resin treatment of cotton knits is to give dimensional stability. The knitted fabric is impregnated with the resin formulation on this extractor pad; it is plaited into a truck, and then it is cured in relaxed state in a reel-type dryer.

Fabric can be opened on this extractor pad, also steamed and calendered if necessary before impregnation in resin, under light roll pressure. Resin solution is constantly circulating by pump from collecting basin (below feed tank) to pan above the impregnating box.

In the final operation of relaxation and shrinkage, the fabric is further stabilized. It is first stretched to width and any pattern distortion removed, then it is steamed, calendered, and batched. When considered necessary, fabric can be over-fed in this passage.

But whatever the design may be, it still must be adapted into a practicable construction from its original "rough" conception. The steps by which this is accomplished are well known and need only be described briefly:

1. Drawing the pattern on graph paper. Consideration must be given to the circular rise, or spiraling effect of the fabric in knitting; and the pattern repeats must be properly joined. In other words, the pattern is designed around the spiraling effect to avoid unpleasing results, such as sharp diagonals.

The accompanying photographs of a three-color Jacquard pattern, drawn on graph paper, show that it is about the size of the pattern as it appears in the finished state.

2. Laying out the pattern. This is an expanded lay-out, also on graph paper, to guide the wheel jackers and the knitter. It shows such essential details as height of all pattern areas, their shape, and the order in which the pattern wheel widths appear in relation to each other during knitting.

3. Mounting pattern wheels on the machine. The numbered pattern wheels are placed in the proper position on the machine to match the correct feed numbers; and they are properly adjusted (individually) with respect to the cylinder walls.

Knitting "Blankets" a Crash Program. At Heller, sampling is not fitted piecemeal into normal production schedules. Rather the entire line, which reaches more than 25 designs for a season, is knitted in a "crash" program. The "blanket" of each design, which normally includes about three color combinations, is carefully studied by styling, marketing, and knitting staffs, who decide almost immediately whether the design will be included in the line.

Generally, only a small number of designs fail to meet the group's approval, for one reason or another; some are tried again in different color combinations. Out of perhaps 25 designs that are knitted, about 20 survive the appraisal. These are then resin-treated and finished for presentation to the trade.

Although styling trends may vary from one season to another, nearly every season's line includes checks, foulards, florals, and plaids, not to mention a range of textured effects.

Dimensional Stability: Prime Goal of Resin Treatment. The cotton fabric as it comes off the knitting machine possesses a degree of shrinkage which can vary with raw material, the conditions under which it has been knitted, the type of stitch, and the like. In general, the degree of shrinkage is high by comparison with that of woven fabrics prior to resin treatment. Thus a prime purpose of resin treating cotton knits is to stabilize the fabric, which is further stabilized by passage through a steaming machine to reduce and control relaxation shrinkage.

However, resin-treatment imparts other properties, such as improved appearance and durability of hand after laundering, which together with the inherent properties of the knitted structure make for a decidedly improved fabric.

The resinating and finishing route at Wm. Heller is carried out as follows:

1. Padding. The fabric as it comes off the knitting machine is thoroughly impregnated and lightly squeezed in one passage.

2. Drying and curing. The fabric is dried and cured in a reel-type, steam-heated chamber. The curing cycle is somewhat longer since lower temperatures—above 300 F, however—are used.

3. Relaxation and shrinkage. In this final process the fabric is straightened and any pattern distortion removed, then it is steamed to relax and control shrinkage. If necessary, the fabric is over-fed in this passage. Some skill, along with a knowledge of fabric behavior, is required to get best results from this operation.

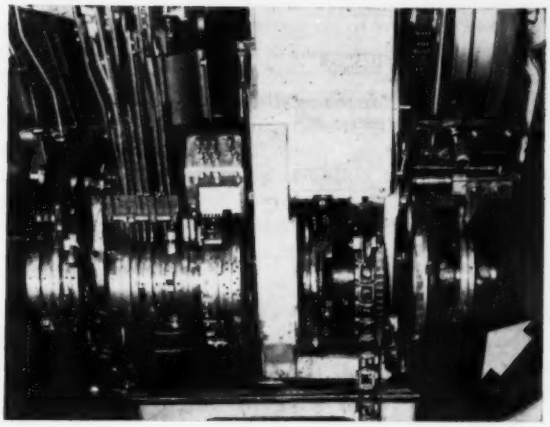
Before shipment, the fabrics are tested for percentage of shrinkage to insure that they conform to customers' specifications.

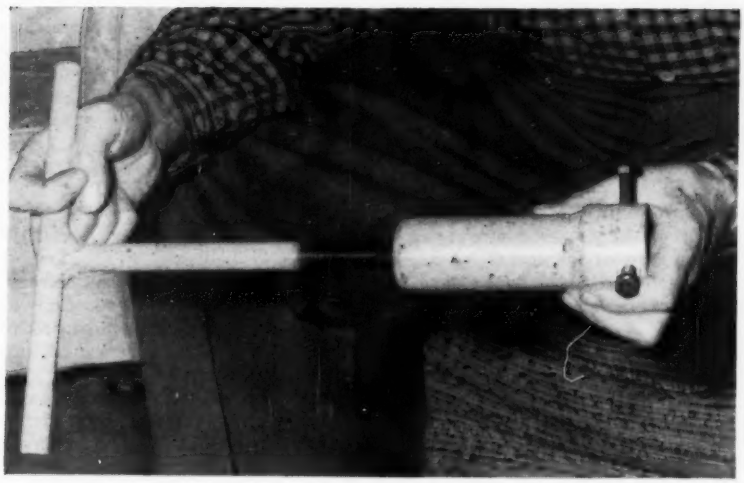
As further developments in resin research and in research on the dimensional stability problem are forthcoming, to extend the utility of cotton knits, they will be adopted by William Heller. The company has ample laboratory facilities, and an experienced laboratory and plant staff to do so.

And above all there is a willingness on the part of management to diversify and modernize with technological and marketing trends.

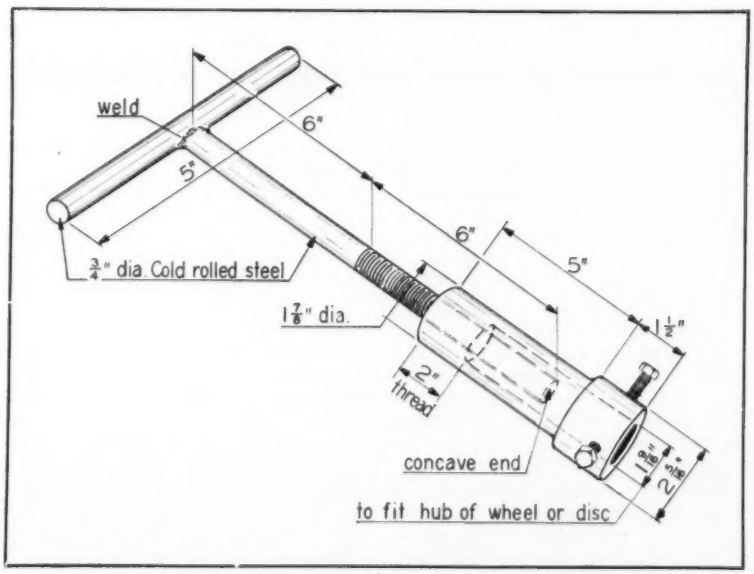
How do YOU remove Banner cam disks?

With this tool, which can be made in your mill shop, the job is easy





The simplicity of this "wheel puller" for Banner machines is shown in this close-up photo. Details of construction appear in the sketch below.



by Ernest Bridges
Exclusive

VERY OFTEN the hosiery machine fixer needs something in addition to screw drivers, pliers, hammers, wrenches, punches, etc., to make certain repairs. Frequently when this happens, he must improvise a tool for the job. Such was the case with the tool described and shown here.

This particular tool was made to do but one job on various models of Banner machines, and for want of a better name it is called a wheel puller.

Various models of Banner machines have one or more wheels or cam disks, as they are commonly called, mounted on the outer end of the main drum shaft. Frequently these disks must be removed from the shaft to permit certain repair to be made or replacement of worn parts, and rarely will a disk be found which easily comes off the shaft.

As shown in the accompanying illustrations, this home-made wheel puller consists of two pieces; (1) a "T" handle made of cold rolled steel, welded and threaded half way, and (2) a puller which can be made of welded steel tubing or a solid piece of steel bored and turned to suit mill needs.

Note that the puller has two setscrews, one on either side, to evenly distribute the pulling load. When mounting the puller on the disk to be pulled off the shaft, remove both setscrews from the disk,

use one setscrew to go through the puller and at least half way into the disk hub on one side. On the opposite side of the puller spot drill the disk by drilling into the disk hub about ⅛" deep through the hole in the puller to get correct location.

Most of these disk hubs have two setscrews, but they are not located opposite each other; therefore, if the puller were drilled and tapped to fit both hub setscrews, the pull would not be distributed evenly. It is better to use one screw hole in the hub and spot drill on the opposite side for the other.

With the setscrews in place, tighten the spot drilled side securely, put in the T-handle, and pull off the disk easily and quickly.

On most Banner models the shaft ends are convex, so the concave shape of the end of the T-handle prevents it from slipping off the shaft when pressure is applied.

Make one and try it. It works and saves a lot of "cussing."

Bright outlook for underwear mills, Institute manager says

■ MANUFACTURERS' shipments of knit underwear, nightwear, and knit outerwear shirts produced in underwear mills continued to increase in 1958, totaling 719,000 dozens more than in 1957, Robert D. McCabe, managing director of the Underwear Institute, said in presenting his annual report to the trade association's board of directors on the eve of the recent annual meeting in Atlantic City, N. J.

Underwear and nightwear shipments totaled 53,921,000 dozens in 1958, according to Mr. McCabe, while knit shirts shipments were 7,266,000 dozens for a combined total of 61,187,000 dozens with a manufacturers' value of $395,704,000.

Shipments during the third and fourth quarters of the year past, Mr. McCabe said, were the highest for these periods over the past five years. He pointed out that while, due to the recession, the 1958 first quarter shipments were substantially less than the first quarter shipments of the previous years, the second quarter mark slightly surpassed that of 1957. The third quarter 1958 shipments of 18,741,000 dozens, said Mr. McCabe, were 661,000 dozens better than the similar period of 1957, and the fourth quarter shipment figure of 16,181,000 dozens of knitted items topped the 1957 closing quarter by 1,071,000 dozens.

Mr. McCabe reported that knitting mills shipped a total of 50,538,000 dozens of knit underwear last year for a gain of 1.4 per cent over 1957. Knit nightwear shipments, he added, amounted to 3,383,000 dozens for a 9.2 per cent increase over last year's figure.

Manufacturers' shipments, he emphasized, rose in all major categories of knit underwear except men's women's, and children's union suits. The largest gains in shipments of individual garment classes were in men's tee shirts, men's and boys' briefs, women's and misses panties and children's vests, undershirts, and step-ins.

"It is both interesting and gratifying" Mr. McCabe said, "to note that since 1954 over-all shipments of knit goods produced by underwear manufacturers have increased by 19 per cent or nearly 10 million dozens. Turning to production figures for further indication of generally healthy state of the industry" he said, "over a longer period of time we find for example that while the U. S. male population over 5 years of age increased by 15 per cent between 1949 and 1958 inclusive, production of lightweight knit undershirts increased by 52 per cent, production of lightweight knit drawers increased by 81 per cent, and production of knit briefs increased 104 per cent.

"In view of both the 1958 figures and those for the last five to ten years as well," Mr. McCabe indicated, "it seems safe to say that Underwear Institute members should find their companies sharing in the predicted expansion of the American economy in the months ahead."

Socks are symbol of happy marriage, say psychologists

■ IN A STUDY, "Creating a Public Image for Men's Hosiery," a psychological study of men's hosiery conducted by the Center for Research in Marketing, Inc., Peekskill, N.Y., for E. I. du Pont de Nemours & Co., Inc., it was stated that "socks function as a universally recognized symbol of the role relationship between a man and his wife; as a symbol accepted by men and women alike, of the wife's care for her husband."

The study, presented for the first time at the recent annual convention of the National Association of Hosiery Manufacturers, in Atlantic City, went on to explain that "when a woman won't wash or darn her husband's socks, she is seen by both men and women as lazy, dissatisfied with her husband, and, in general, a 'no good wife'." Or, if she is a good wife, something must be wrong with him. In a happy marriage, said the psychologists, women are expected to buy and care for their men's socks.

Half of all sock purchasing is done by women, and when a husband always buys his own socks, according to the Center psychologists, "this is seen by wives as rejection by the husband and appears to be part of the general syndrome of marital unhappiness."

Men may verbalize disinterest in their socks, but let their wives fail to care for them and, says the study, "all the emotion that has been lacking in relation to socks appears in a volcanic eruption."

But while women buy and care for their husband's socks, they don't really know what their husbands like in hosiery. The study revealed that men's taste in socks ran to those which were expressive of vanity, self-assertion, and aggression. Asked to express their idea of socks in a word pair test, 82 per cent of those questioned picked the word "gay" rather than "somber"; 88 per cent chose "luxurious" rather than "miserly"; 68 per cent chose "peacock" over "dove"; 68 per cent picked "wolf" as against 32 per cent who chose "mouse," and 68 per cent chose "Thunderbird" as against "Chevy."

First things first!

The performance of your knitting machines depends on the quality of the needles. With Textile Spring-Beard Needles, you get the ideal combination of strength and resiliency for superior knitting results. With the most exacting controls, Textile gives you absolute dimensional uniformity — in stem, side, back, and beard.

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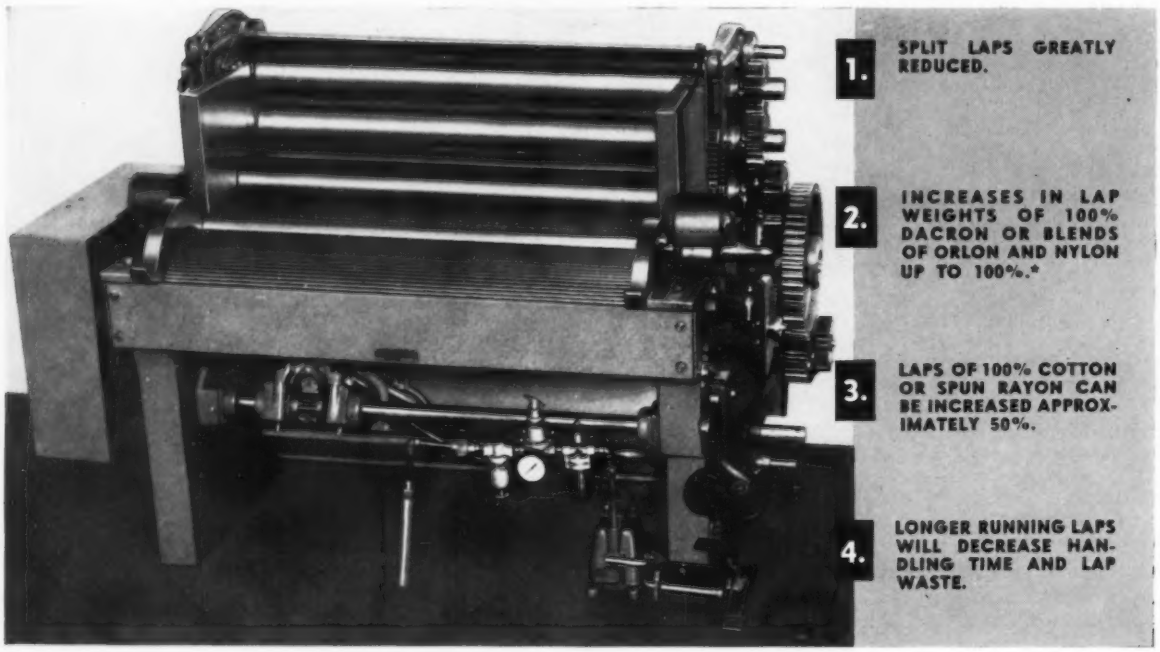
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**Based on actual mill installation figures.*

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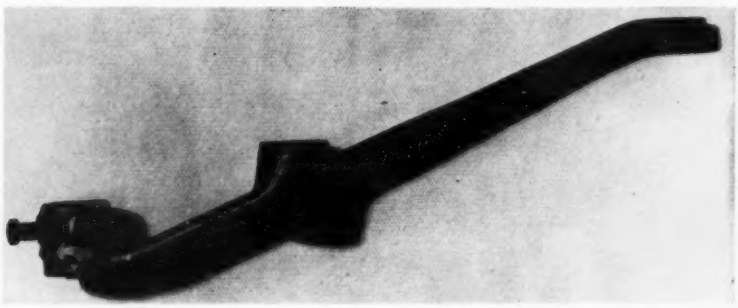
HOW OTHERS MANAGE

Modifying loom shipper lever relieves parts strain



THE EDITORS:

The shipper lever on any Model E loom, belt- or motor-driven, can be modified to offset the usual wear that creates so much starting and stopping trouble. When the shipper lever gets worn approximately ½", and the shipper rod wears a proportionate amount, about an inch of play exists at the joint. This must be taken up before the shipper sleeve begins to move to off position as the shipper handle is released.

Meanwhile, the brake begins to apply its stopping force before the clutch is disengaged. The condition exerts much unnecessary and destructive force on brake, clutch, and related parts. Furthermore, one must keep the clutch friction tighter than usual to offset the wear, and this in turn keeps a

(Continued on p. 145)

REACH FOR THAT IDEA NOW. THEN—

ENTER one or more kinks, short-cuts, time savers, or quality improvement suggestions in TEXTILE INDUSTRIES Kink Contest which closes August 15. Winner of the contest gets $100, in addition to payment at present space rates for all items accepted for publication.

The contest rules are simple:

► All contributions must be postmarked not later than midnight, August 15, 1959.

► No limit to the number of entries an individual may submit in any one contest.

► All entries paid for upon acceptance — no waiting. Extra payment for photographs that are usable. Extra consideration is also given kinks accompanied by legible pencil sketches or drawings.

► Entries must not have been published previously and must not be submitted to any other publication.

► Send your contest entry to: The Editors, TEXTILE INDUSTRIES, 806 Peachtree St., N. E., Atlanta 8, Georgia.

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Emulsifiable A-C® Polyethylene

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Already widely accepted as a *softener and finishing agent* to impart superb "hand," the new emulsions containing A-C Polyethylene benefit every type of synthetic and natural fiber in some way over other textile finishes. In addition to better "hand," they provide higher abrasion resistance, improved tear strength, extra crease resistance, permanence through multiple cleaning cycles, and better sewability through reduced needle cutting.

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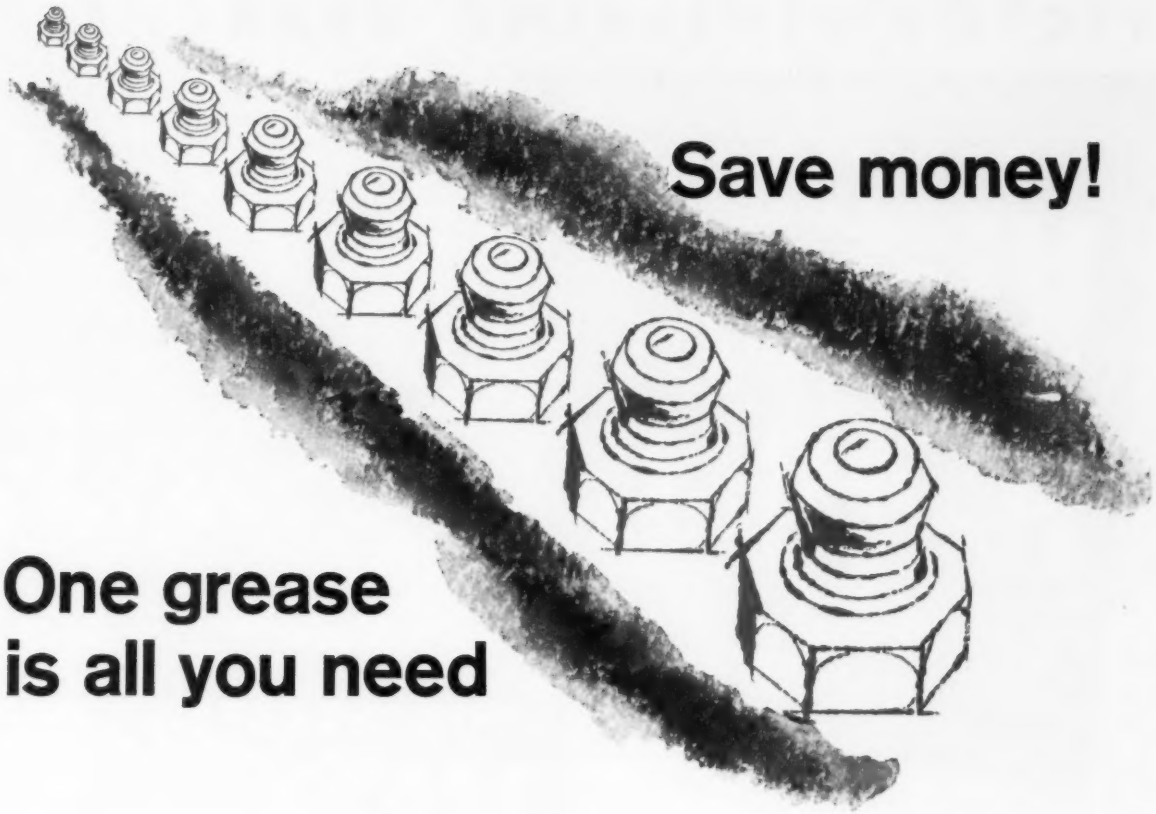

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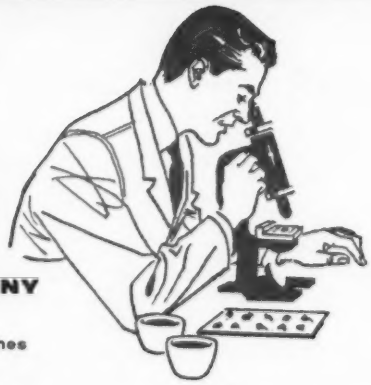

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(Continued from p. 141)
constant strain on the friction and its end bearings if on a motor-driven loom.

By changing the lever as illustrated here, much of the strain and wear mentioned are avoided, and belt-driven looms made to stop much quicker. Cut the crooked end off the shipper rod. Weld a whip roll arm plug into the hole of the shipper lever; insert the shipper rod through the cross hole of the plug; and tighten the set screw to hold the shipper rod adjustment. The shipper rod will be forced to bend slightly as the lever moves, but the movement will not cause serious binding.

CONTRIBUTOR No. 1149

Fade-proofing chemical wanted for pad application

THE EDITORS:

We are interested in a color lock, fade-resistant, or a fade-proofing chemical for pad application to drapery fabrics. Please send us the names of such companies that manufacture said chemicals. . .

CONTRIBUTOR No. 1160

(Sensing that there would be something of reader interest here, we requested copies of any correspondence that took place between the firm seeking the information and the suppliers. One such reply, containing much technical advice, follows.—The Editors)

". . . We have heard from TEXTILE INDUSTRIES that you asked them. . . for information about 'a color lock, fade-resistant or fade-proofing chemical for pad application to drapery fabrics.' As your question is very complex, we should like to answer your problem of lightfastness of colors on drapery fabrics in detail.

"The lightfastness of colors of plain-dyed or printed goods depends principally on the kind and the quality of dyestuffs used. Even if the lack of lightfastness of a dyeing can be improved by some aftertreatment, it can only be to a limited extent.

"Within a certain group of dyestuffs, e.g. direct dyestuffs, there are dyes which have acceptable lightfastness for use on draperies, but others are not fast enough. We offer you. . .direct dyes for direct printing on cellulose.

"Aftertreatment generally has an influence on the lightfastness. A dyestuff fixing agent usually drops down the lightfastness of the dye by one or two points. . .Resin finishes damage the lightfastness of some direct dyestuffs in the same way as fizing agents do. In some case, even the lightfastness of vat dyes and other solid dyes is damaged by resin finishes. . .

"We offer a wash-and-wear resin finish using a ureaformaldehyde resin and a catalyst that does not damage the lightfastness. If pigments are used, the 'binder' may have a negative effect on the lightfastness. We can give you. . .formulation which does not have any influence on the lightfastness.

"Your question for a fade-proofing chemical for pad application to drapery fabrics deals, we presume, with the use of ultraviolet absorbers. This kind of chemical will only improve the lightfastness of dyes which are already fast to light.

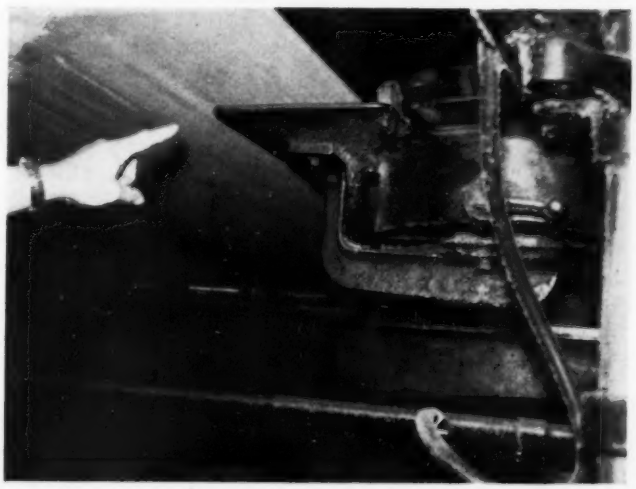
"Generally speaking, a dyestuff is destroyed principally by the visible part of the sunlight. As the ultraviolet light is the much smaller part of the sunlight, compared to the visible part, it has less influence on the lightfastness of a dyestuff. It is pointless to prevent the ultraviolet light acting on the dyestuff if it is already destroyed by the visible light.

"If we had more information about the kind of printing, the dyestuffs used, and the degree of lightfastness needed, we would be able to give you more detailed information. . ."

A DYESTUFF SUPPLIER

Tenter guider plate reduces tear-outs

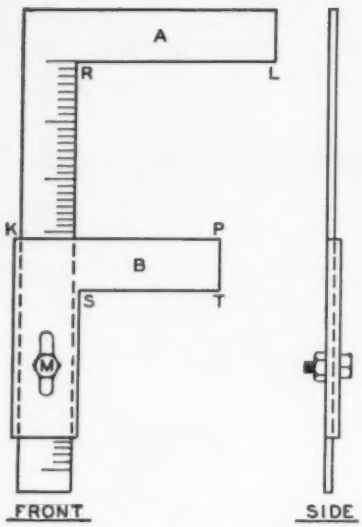
At speeds ranging upward to 200 yards per minute it was difficult for the cloth guider to correctly position the cloth on tenter frames at North Carolina Finishing Co. Putting the guider in a guider plate proved to be helpful for the guider in regulating the cloth and effected a marked reduction in the number of tear outs and folded selvages at the critical point where the cloth enters the tenter clips. Lester Broadway of the frame department is credited with suggesting the improvement.



Gauge aligns ring rail to base rail

THE EDITORS:

It has been found that during the pursuit of general cleaning and maintenance schedules on ring spinning frames, that ring rail leveling was a problem that often took more time than seemed proper. Besides, during the normal running more ends down were noticed due to improper level of the ring rail. The illustrated gauge for leveling ring rails has been found quite satisfactory.



The leveling gauge is prepared from 1/10" steel plate of suitable dimensions. It is comprised of two L-shaped members (A and B), resembling carpenters' squares, coupled together by a small bolt and nut M. The smaller of the "squares" (B) is slotted and its edges are bent so that it can easily be slid on the graduated leg of the other "square" and can be fixed at any desired position.

Before using this gauge the ring rail is brought down to its lower position. At one end of the ring rail, near a lifting rod, the gauge is placed so that the face RL sits on the ring rail first. Bolt M is slackened and B is slid so that the face ST rests on the spindle rail. Then bolt M is tightened to hold the gauge setting.

The fixed gauge is then placed near every lifting rod along the length of the frame and the lifting rods adjusted until the faces RL and ST touch the ring rail and spindle rail respectively.

The instrument is not only handy, but it can be used readily to check up if any of the ring rails are suspected to be out of level. As an additional help the long leg of the gauge is scored to read either in one-eighth-inch or one-tenth-inch graduations. Then, once the ring rail is leveled and set, the reading indicated by the side KP is recorded for future reference.

CONTRIBUTED No. 1146
(India)

Applying "correct" amount of wax to sewing yarns

THE EDITORS:

Precisely what is the amount of wax needed on three-ply mercerized cotton sewing yarns to give best results in sewing? This certainly is a debatable question and requires diligent investigation because of the several factors involved. In this article the wax is in the form of a block, Figure 1, and is applied by the gravity pressure of the block, or disk, on the moving yarn. Some mills set the block at an angle.

One mill that specializes in two- and three-ply yarns for the needle trades, and domestic use, has a specific ruling regarding the amount of wax to be used for application during the finishing winding operation. In the plant under review, abrasion (attrition) is the means of waxing; the yarn in its passage to the finished package picks up on its surface a certain amount of wax from the solid block, or disk.

The size of this wax block is approximately 1¼" in diameter, and its height is about ½". Due to attrition, the waxers diminish in size, and it was found for best results the disk should never go below ¼" thickness.

Apparently, the degree of attrition, or the amount of adsorption of wax on the yarn, in a certain manner spells success or failure.

By success or failure, a dual connotation comes to mind. The effect of the waxing may give the yarn a most perfect sewing quality. On the other hand to obtain this desirable sewing feature enough wax may become attached to the yarn to give it a flaky or lackluster appearance. This is fatal, because a mercerized article must have not only sewing ability of a high order, but also great luster.

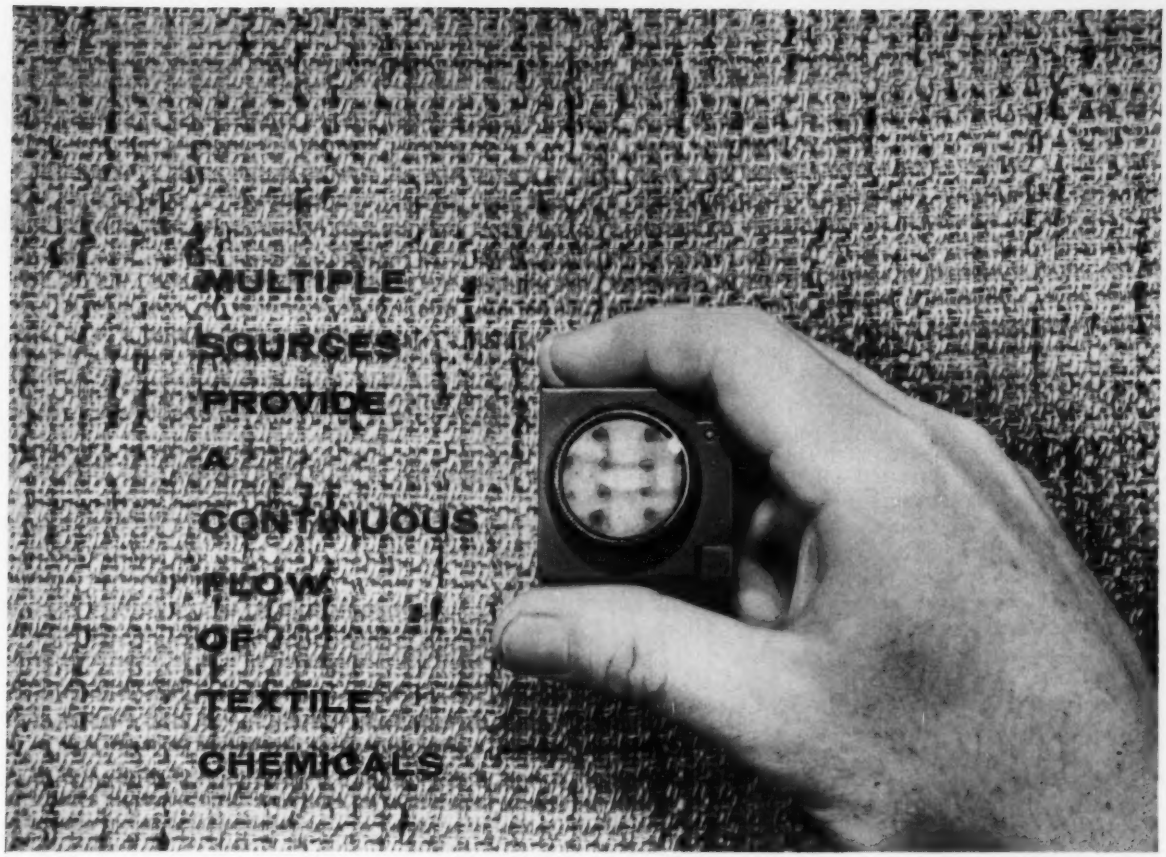
It should be borne in mind, too, that for best adhesiveness of wax, the disk of wax must be free to move up or down on its pin. It must have good mobility, either through the action of the moving yarn or from the rotation of the stand on which it rests, Some mills use the positively driven base.

Some mills use a liquid wax through which the yarn passes on the winding machines. Other mills put liquid wax in their bleaching and dyeing processes. In this article we are concerned only with solid wax.

The solidity of the wax disk is of interest. Its degree of hardness, (or softness) means a great deal to the success of the yarn when it gets to the sewing operation. A mill molding its own wax has an advantage over others. It is always in a position to test small quantities of different experimental combinations of wax.

Some mills find air conditioning an excellent method of maintaining the degree of firmness or hardness. It also eliminates the necessity of stocking two compositions of waxes—summer and winter.

Carnauba, paraffin, etc., may be combined in various quantities, if desired, but tests should always



Carbon Disulfide, Caustic Soda, Sodium Sulfhydrate (Sodium Hydrosulfide) and Sulfuric Acid are in constant demand.

It has long been Stauffer policy to provide these essential textile chemicals in a steady stream.

Stauffer plants in Virginia, Tennessee, Pennsylvania, Ohio, Western New York and Alabama are the chief sources for the Textile Industry.

A traffic department of professional skill maintains daily contact with the movement of chemicals by truck, tank car and barge.

Top quality chemicals, tremendous capacity, multiple sources, skilled and conscientious traffic control have made us many satisfied customers in the Textile Industry.

We're looking for more!

Especially, we'd like to hear from people who can utilize Stauffer's Technical Service on handling, safety and materials of construction for these important textile chemicals. Stauffer is the country's leading producer of Carbon Disulfide, one of the largest producers of Sulfuric Acid and Sodium Sulfhydrate, and a major producer of Caustic Soda.

Stauffer CHEMICALS SINCE 1885

STAUFFER CHEMICAL COMPANY

380 Madison Avenue, New York 17, New York
Prudential Plaza, Chicago 1, Illinois
824 Wilshire Boulevard, Los Angeles 17, California
636 California Street, San Francisco 8, California
P. O. Box 9716, Houston 15, Texas

SOUTHERN OFFICE: Stauffer Chemical Company, 2350 Palmour Drive, N. E., Atlanta 5, Georgia

For further information use Handy Return Card, Page 171

include examination, luster particularly, of the finished goods as well as the sewing qualities.

Once a certain composition of wax has been decided on, a very definite and regular program of chemical analysis should be instituted for determining wax content of the yarn. The wax content should be used in evaluating the sewing performance and the appearance of the finished goods.

The reason for the wax content test is that the writer has found that occesionally a yarn of good sewing quality has a lesser quantity of wax than has a yarn with a fair or even poor sewing result. The theory for this apparent contradictory situation is that it is entirely due to the more even take-up or adsorption of wax of the well-sewing yarn.

This brings to mind that the size of the solid block of wax may have to be decreased in certain of the colors. Otherwise, a flaky or fuzzy appearance of the finished article may result. In the case of the smaller disks, it may be said, the matter of excellent adsorption is indeed very important so that good sewing properties as well as beautiful appearance will ensue.

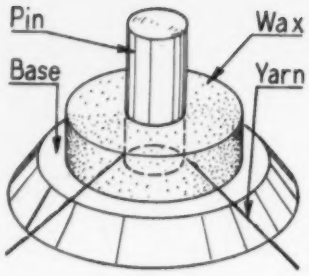


Figure 1

The question of yarn speed enters. Sometimes it is expedient to reduce the speed somewhat to get the maximum benefit from the waxing.

Having decided on the size and composition of the wax blocks, the question of inspecting the waxes so that they will not get below a certain specified thickness is important.

Who shall be responsible that the disks will be kept within the tolerance setup? The machine operator? The fixer? The foreman?

One mill has found it a good practice to hold the operator, who is always at the machines, chiefly responsible for the replacement of the waxes. In this plant the fixers and foremen, too, are required to alert the operator when they notice the waxes getting down to below standard size.

CONTRIBUTOR NO. 1120

What it may cost not to have an adding machine

THE EDITORS:

How much does it cost to have an adding machine on a desk in the general office of a mill? How much does it cost to have a calculator instead? How much does it cost to be without a machine? These are questions that must be fully answered by any office manager before he buys. This article will show one mill's answer to the problem of "how much?"

The cost of any capital expenditure must be pro-rated and distributed as a part of the whole operation to determine its true cost. Modern calculating machines are definitely c a p i t a l expenditure items. Here are average cost figures and percentages for an adding machine station:

	Monthly Costs	Percentage of Total
Operator's salary	$200.00	88.19
Space (pro-rated)	18.00	7.94
Desk, chair, supplies, etc.	5.40	2.38
Electric adding machine	3.37	1.49
Total cost	**$226.77**	**100.00**

It will be noticed that the average adding machine station in an office would cost approximately $226.77 each month. This includes the operator's salary, the space the station occupies in the office, the monthly depreciated expense of a popular electric adding machine, the desk and a chair plus administrative expense for supplies. Note that the pro-rated depreciation expense of the adding machine is the least of the individual costs.

How much does it cost without an adding machine on that desk? Certainly the operator cannot do the work as fast by hand. And what about the accuracy of pencil-and-paper figuring?

Quite obviously, the 1.49% will be included in the labor factor and the station will still cost $226.77 each month. In other words, a business is paying for that adding machine whether it has it or not. If there is any volume of figure work at all, it is saving money by putting an adding machine on that desk.

For example, suppose an office has some volume of figure work. Let's say it isn't very much and perhaps there is a hand adding machine to help out. An electric adding machine will certainly save at least 10 minutes a day over the hand figuring or pulling the handle on the manual machine. Only 10 minutes a day is a savings of 25¢ per day, $1.25 per week, or $5.42 each month.

How much does it cost to have an automatic printing calculator on that desk? Here again are average figures:

	Monthly Costs	Percentage of Total
Operator's salary	$200.00	87.45
Space (pro-rated)	18.00	7.87
Desk, chair, supplies, etc.	5.40	2.36
Popular printing calculator	5.29	2.32
Total cost	**$228.69**	**100.00**

The figures show that the average calculating station with an automatic p r i n t i n g calculator would cost approximately $228.69 each month. They also show that the pro-rated depreciation expense of the calculator is the lowest cost of the entire station.

How much more does it cost to have a calculator? The actual dif-

ference is only $1.92 per month 48¢ per week or about 10¢ a day. When the operator is paid $200 per month, $50.00 per week or $10.00 per day, she need only save four minutes a day over the use of the adding machine to pay for the calculator.

This amounts only to 30 seconds out of each hour during a normal eight-hour work day. In most cases, depending upon the figure work, the operator will save a lot more than four minutes a day and then the mill is really saving money when buying the calculator.

At a daily savings of four minutes, the station is breaking even and just paying for the calculator. Let us say the operator can save an additional ten minutes or just 14 minutes a day. Fourteen minutes is a savings of 36¢ a day, $1.80 a week or $7.74 a month. When the calculator costs the mill $5.29 a month and it arrives at a savings of $7.74, the net profits in purchasing and using the calculator amounts to $2.45 each month. In ten years, it adds up to $294. That's a lot to lose by *not* using a calculator.

Analysis of one's own particular expenses and justification for an adding machine or calculator station will result in a more efficient office. Mill accountants are cognizant of this fact, especially where a reduction in personnel requires a reallocation of duties.

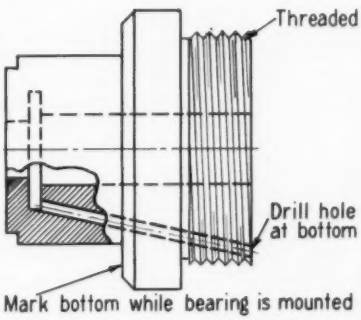
CONTRIBUTOR No. 1054

Stops oil slinging from card comb boxes

THE EDITORS:

Some years ago a plan was worked out to prevent plain bearings in doffer comb boxes from throwing oil. The plan is adaptable to all revolving top flat cards so equipped, and is as near a complete cure for oil throwing as I have seen.

The large bearing through which the pulley shaft runs contains an oil groove near the outer end of the bearing (see illustration), and when this groove fills with oil it often works along the shaft to the outside of the bearing and is slung off. The correction for this is simple.



Punch corresponding marks on the bottom of the bearing flange and the comb box while the bearing is in working position. Remove the bearing and drill a small hole (⅛" will do) through the bearing, starting near the inside bottom edge and coursing upward to the bottom of the oil groove. This is shown in the illustration. Be sure to drill the hole near the bottom of the bearing (that is why it was punch marked) so that when it is returned to working position the proper fall exists between its opening in the groove and the drainage point inside the box.

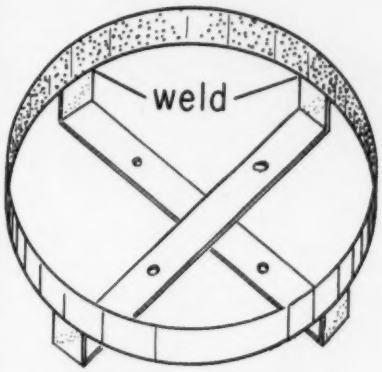
CONTRIBUTOR No. 1163

Keeps waste cans from "wandering"

THE EDITORS:

In our card room we had a lot of trouble keeping our waste cans placed in the desired positions. We tried painting spots on the floor to keep them set on, but that did not help much.

We made metal rings, using 1¼" x 3/16" band iron, one inch larger in diameter than the cans. The ends were welded to form a smooth joint.



We then made two cross members, see illustration, from the same stock to act as bases for the rings. The ends of the cross members were bent upward at 90 degrees and welded to the rings to give them (the rings) about one inch of clearance above the floor. Through these cross members we drilled four holes to receive No. 10 wood screws for securing the bases to the wooden floors.

Our machine shop made up enough of these holders for all our waste cans, which are nothing more than painted card sliver cans. The bases were painted to match the code color of the cans they were to hold—white for white waste and blue-gray for clearer waste. Spotting these holders in the desired places around our drawing frames, combers, and fly frames has helped us keep our waste cans in the proper places.

CONTRIBUTOR No. 1162

Loom production chart

Readers who must spend considerable time calculating loom production for style changes, etc., may find useful a chart included in the 1958 edition of *Warp Sizing*, a book published by TEXTILE INDUSTRIES. The tables on pp. 456 and 457 list loom production for 40 hours at 100 per cent, derived by plotting loom speeds against picks per inch in intervals that permit easy interpolation.

THE EDITORS

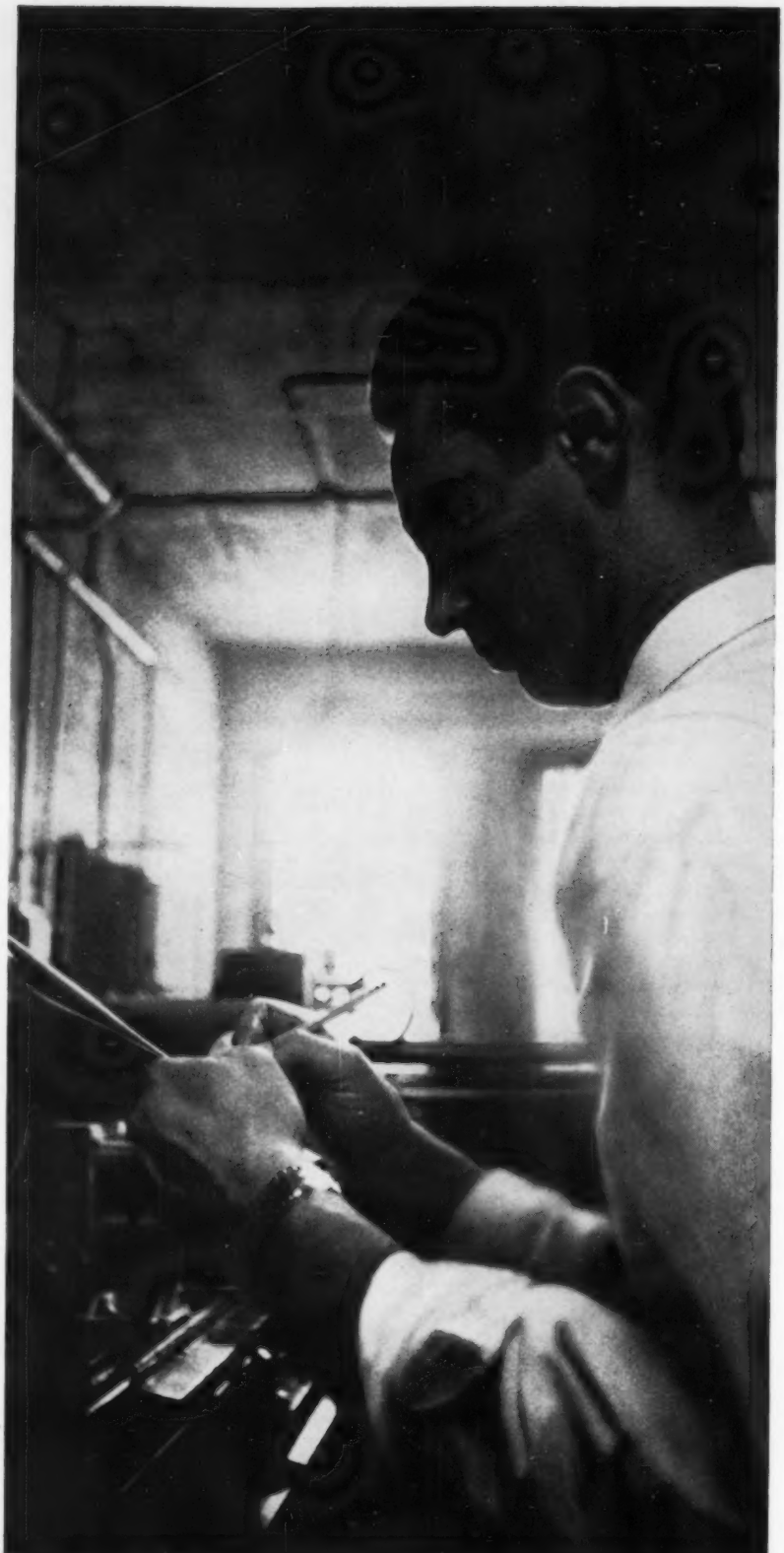
(More "How Others Manage" on p. 153)

HERE'S HOW ESSO RESEARCH CAN GO TO WORK FOR YOU

The Esso Lubrication Engineer brings to your shop the vast experience and facilities of Esso laboratories and research—as a customer service.

He offers, with a broad knowledge of fuels and lubricants, considerable experience in the maintenance of equipment like yours. For instance, he can trouble-shoot cases of rapid wear and frequent overhauls... point out instances where too much lubrication is wasteful... where too little—or the wrong kind—results in unnecessary wear. And if you have an unusual problem, he can have it analyzed in one of the conveniently located Esso Sales Service Laboratories—capable of running over 500 different kinds of petroleum product tests.

Let an Esso Lubrication Engineer help *you* cut maintenance costs. For more information, contact your nearest Esso office, or write to: Esso Standard Oil Company, 15 West 51st Street, New York 19, N.Y.



ESSO

In industry after industry..."ESSO RESEARCH works wonders with oil"

Dixie Bearings, Inc.

the maintenance man's friend...through service!

Dirt . . . the most feared enemy of any good anti-friction bearing was damaging many bearings in the maintenance stock at this plant. Our salesman was called and within a short time reorganized their maintenance stocks of bearings and developed a more practical record keeping system.

First—all bearings in stock long enough to be affected by dust were taken to our branch. There, they were thoroughly cleaned, rewrapped and repackaged to be as dustproof as possible.

Second—all bearings in use were identified by our salesman according to the bearing manufacturers' numbers. By converting the equipment manufacturers' parts numbers to standard bearing numbers, many bearings purchased from various sources under a variety of parts numbers were found to be identical.

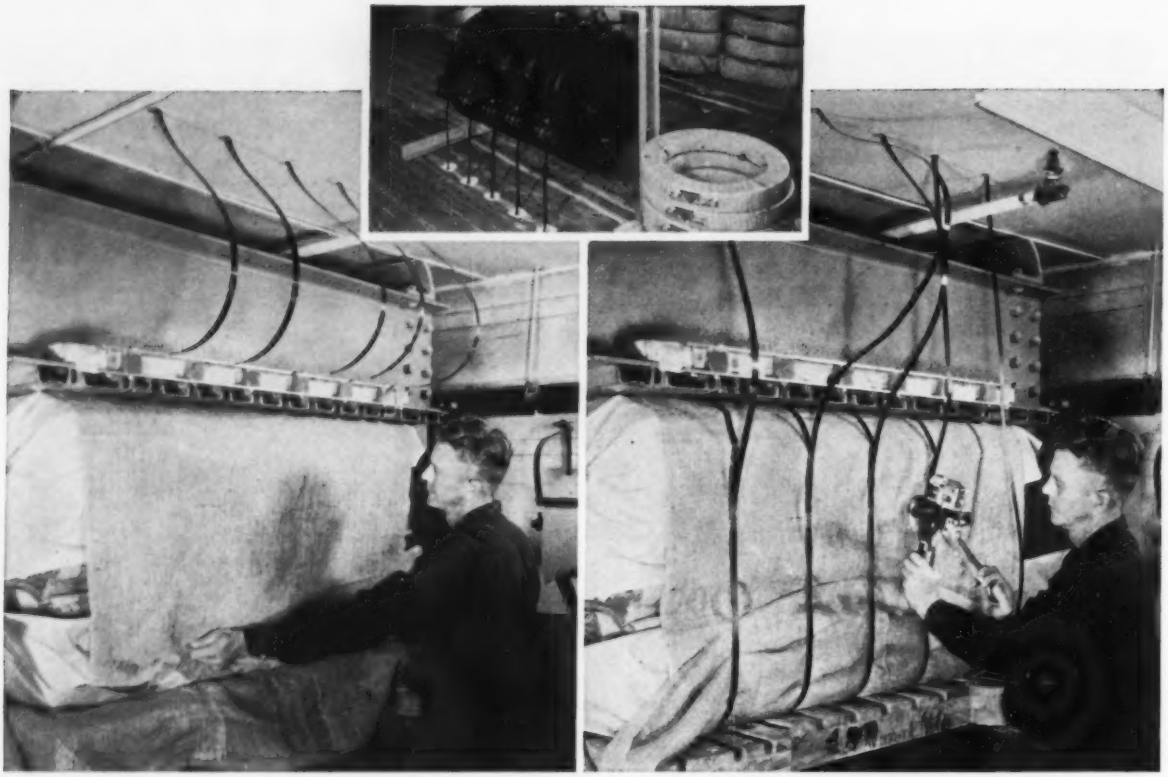
Weeding out these duplicates greatly reduced our customer's purchases for inventory. We now know what bearings the plant uses and make certain stocks for any emergency are carried at our branch. Our customer now installs only factory-fresh bearings from inventory or orders from Dixie Bearings and receives the bearings they need immediately.

Need this kind of service—service with a capital "S"? Just call our nearest branch—no obligation, of course.

Providing bearing service in the South

DIXIE BEARINGS, INC.

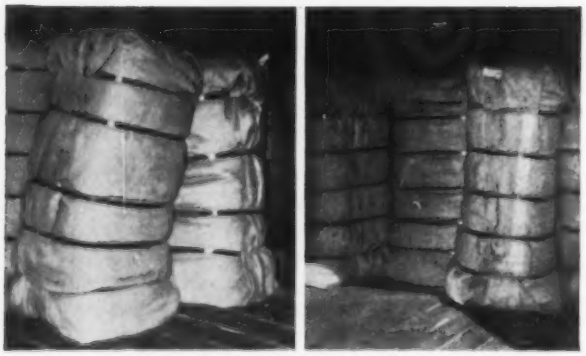
FLORIDA: Jacksonville • **GEORGIA:** Atlanta • **KENTUCKY:** Louisville
LOUISIANA: Baton Rouge • New Orleans • **N. CAROLINA:** Charlotte • Greensboro
S. CAROLINA: Greenville • **TENNESSEE:** Chattanooga • Kingsport • Knoxville • Nashville



Strapping is fed from dispensers in room above press (inset). A magnetized bar holds the straps in position while bale is readied.

Signode's exclusive Model SFC tool tensions the strapping, feeds seals from magazine, and crimps them. Straps are severed at the seal. No waste strap.

Signode way produces denser bales and reduces strap use by 17%



These before and after photographs show clearly the improved density and appearance of bales.

Here's an example of a simple and inexpensive answer to a packaging problem. Waste—which was part of the former cut-to-length strapping method —was eliminated, with a 17% saving in the amount of strapping used. Bales are better looking. Their increased density saves about 7% of valuable space in storage and shipment. The entire strapping operation is simplified, goes easier and faster.

Why not let a Signode man take a new look at your packaging and shipping operation. He has an eye for savings, specialized knowledge of textile applications, and a complete line of strapping tools and machines at his disposal. Call him today, or write:

SIGNODE

First in steel strapping

SIGNODE STEEL STRAPPING CO.

2664 N. Western Avenue, Chicago 47, Illinois

Offices Coast to Coast. Foreign Subsidiaries and Distributors World-Wide
In Canada: Canadian Steel Strapping Co., Ltd., Montreal • Toronto

Helps keep sweaters properly sized

THE EDITORS:

In our mill, where about 50 different styles of sweaters and cardigans are made each season, there was a great amount of trouble in keeping the garments to the correct size in the sewing operation and to the correct quality in knitting. This was due to the lack of a standard manufacturing sheet where all the required standards could be entered for the record.

By designing such a sheet for each of our styles from yarn specifications through knitting quality and finished dimensions, and supplying the sheets to all foremen in the various departments, we were able to improve our accuracy in sizing; and there never were misunderstandings as to the required size. A copy of the sheet is illustrated here.

CONTRIBUTOR No. 1107

DL. 1800 **Yarn: 32/2's Dyed.**

RAGLAN SLEEVE JUMPER

Machine: 12 Gauge, R.T.R.

Knitting Details

	Bodies			Sleeves		
	34"	**36"**	**38"**	**34"**	**36"**	**38"**
Machine Diameter	15"	15"	15"	13"	13"	13"
Links	60/326	60/332	60/338	60/382	60/388	60/388
Rib widths	93 x 93 x 6	96 x 96	96 x 96	80 x 80	80 x 80	80 x 80
Courses per inch	1/1 = 22.5 Courses per inch tubular welt = 25.5 - 26					

Actual Courses

Panel (Ex. L. Courses)	532	544	556	644	656	656
Rib (Ex. Welt) Dial	47	47	47	47	47	47
Cylinder	47	47	47	47	47	47

Cold Measurements off Machine

Over-all length	26"	26½"	27"	31"	31½"	31½"
Rib (Minimum)	1¾"	1¾"	1¾"	1¾"	1¾"	1¾"
Width	15½"	15½"	15½"	13"	13"	13"
Weight						

Cutting Details

Length	23½"	24"	24½"	28"	28½"	28½"
Width	7¾"	8"	8"	6½"	6½"	6½"

Finished Dimensions

Length	22½"	23"	23½"
Width	15"	16"	17"
Underarm	16½"	17"	17"

Courses per inch 1x1 = 25 Courses per inch tubular rib = 27

Collar Details

2 ends 2/32's
2 x 2 Rib collar
12 Guage A.J.U.M.

Rib width = 79 Width off Machine = 10"
Courses = 188 Depth = 7¾" — 8"
Pattern measurements = Width 5", Depth 7½"

Need Money?

Send TI your kinks, short cuts, etc. (the rules are on p. 141). In addition to being paid for all your acceptable work, you may walk off with one of the three $100 prizes given yearly.

Keep 'um slippery

THE EDITORS:

Why lubricate? A study of a mill scrap heap shows that almost all the parts there wore out from lack of oil. It is hardly necessary to point out what this means in added supply cost, downtime for replacements, increased power costs, damaged goods, and bad work from the parts not working freely and properly. A trained oiler, not just one who carries an oil can and a grease gun, could mean much in abolishing such a situation.

There is much sentiment to support the statement that a good oiler is worth more to a textile plant than is a good fixer. Be that as it may, it certainly pays to have the proper lubricant put in the bearing, not just on the bearing and on the floor, in the proper amount. The oil companies are most helpful in determining the best oil or grease for a particular bearing. Use them.

CONTRIBUTOR No. 1130

DYERS AND FINISHERS

lead
the field

Thermostable Diastafor desizing agent leads the field for top performance—for dependable desizing at lower costs.

Different types and strengths are available to meet your individual needs. For high temperature, continuous process operations, select special high potency Diastafor LCD.

Be sure of quality. Save time and cut costs. For the good prepare that means a finer finish, use Diastafor—leader in its field for more than 45 years.

For technical information, address Diastafor Department.

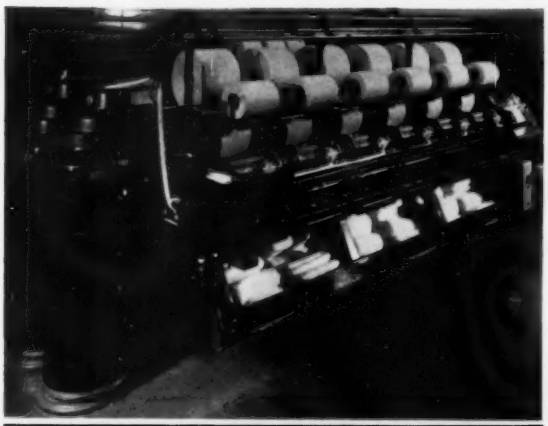
with **DIASTAFOR**® *desizing agent*

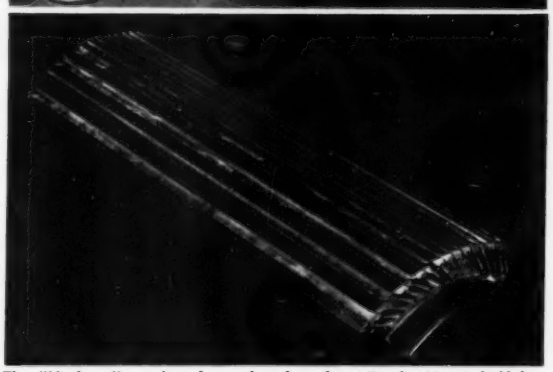
STANDARD BRANDS INCORPORATED • 625 MADISON AVENUE • NEW YORK 22, N.Y.

NEW PRODUCT PARADE

Please note: Claims made in all of these announcements of new developments are of necessity based upon information furnished by the respective suppliers.—The Editors.

Special comber for carded yarn mills





The "Upsheen" comber (top photo) and its Eureka No. 5 half lap.

A recent cotton combing development makes it practical for carded yarn mills which are making bag sheeting, for example, to convert to the manufacture of Type 4 twill and sell the goods at prices which are competitive.

Now commercially available for economical use in the card room is a machine that (1) upgrades the cotton processed through it by removing a minimum percentage of fibers, removing neps, trash, and immature fibers, and (2) adds the luster which previously has been associated with combed yarns only.

For example, by using the new machine—called the Saco-Lowell "Upsheen" (contraction of "up" for the upgrading it does and "sheen" for the luster it adds) comber—a mill that is making Type 4 twill should find that Strict Good Ordinary 1" cotton is just as satisfactory as Middling 1" cotton processed by the conventional carded yarn system.

The principal difference in this new comber, which will process fiber from ⅞" to 1-1/8" in length with noil extraction as low as 2 per cent, and the conventional Saco-Lowell comber is in the half-lap (see accompanying illustration) and top comb needling and in the draw boxes.

Experience indicates that it is practical to assume a normal production rate of 70 to 80 lb per hr at 100 per cent efficiency with a noil percentage of 6 to 8 per cent, depending on distribution of fibers.

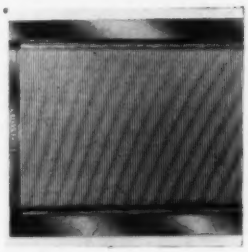
When converting to the "Upsheen" process, carded yarn mills usually add a lap winder for every 30 cards approximately and an "Upsheen" comber for every 6 to 7 cards.

Existing Saco-Lowell combers may also be equipped for "Upsheen" processing by replacing the half laps with the Eureka No. 5 type and installing the wider draw boxes.

Saco-Lowell Shops, 60 Batterymarch St., Boston, Mass.

Do you want more data? Write ◂ or use card on page 171; list 6-101

Resilient loom reed improves fabric quality



The "Duraflex" loom reed, which was recently placed on the market, offers the following advantages for weaving fabrics of all types:

1. Fabric of higher quality is produced as the more accurate spacing of the dent wires prevents warp streaks and reed marks.

2. Dent wires do not break and there is no other vibrational damage in operation because of the shock absorbing characteristics of the bonding material.

3. Greater strength throughout the entire reed frame, yet more flexibility of the frame.

As shown in the accompanying photograph, the new reeds are much like standard soldered reeds with the exception that they can be furnished with an aluminum channel instead of the flat plain strips. This channel completely covers the edges of the dent wires and protects against any damage from downward pressure.

Schmidt Mfg. Co., P. O. Box 560, New Bedford, Mass.

Do you want more data? Write ◂ or use card on page 171; list 6-102

The Laurel Leaf

BUSINESS MAGAZINE EDITION

LAURAVEL SC

A versatile softener for finer finishing of all types of yarns and fabrics.

If you are looking for a softener just a "little better than the rest," you should know about LAURAVEL SC, a nonionic softener recommended for the fine finishing of all types of yarns and fabrics . . . especially cotton goods. It's available as a soft liquid paste that's readily dispersable in hot water. It bestows full-bodied softness to fabrics, resists aging, and will not alter shades nor yellow whites.

Much of LAURAVEL SC's wide popularity results from its high resistance to salts, acids, and alkalies. It is stable in salt, Epsom Salt, and acid-chrome finishing baths, and may—under certain conditions — be used in the presence of 1% to 2% solutions of salt, making it ideal for softening many direct colors where a salt color fixative is used.

LAURAVEL SC is more compatible than many of its anionic counterparts with other finishing agents, such as resins and dextrines. Fabrics finished with it show excellent resistance to scorching. Used as a top softener in resin-treated goods, it is stable to residual products in the goods. It gives a superior lubrication to improve sewing and cutting properties, and adds good napping characteristics to fabrics. It gives a hand far less limp and raggy when used as a replacement for many conventional oils and softeners in compressive shrinking processes.

It's really easy to prepare and apply LAURAVEL SC—just mix with hot water and add to the last rinse. For finishing mixes, it may be added directly to the batch and boiled up with the rest of the ingredients. And, you can apply it with virtually any type of equipment. Write for a generous free sample and *see for yourself* what excellent results you'll obtain!

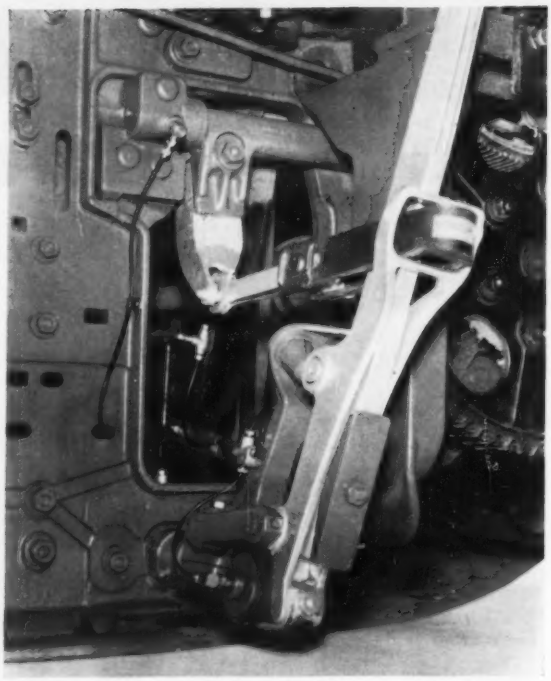
Laurel Brand 50 YEARS OF SERVICE TO INDUSTRY 1909-1959

Laurel SOAP MANUFACTURING CO., INC.

TIOGA, THOMPSON & ALMOND STS., PHILA. 34, PA.

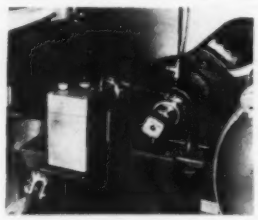
Warehouses: Paterson, N. J. Chattanooga, Tenn. Charlotte, N. C. Greenville, S. C.

Automatic oiling system for Draper looms



How the bearings of a link type parallel on a Draper loom are automatically lubricated is shown here. Note tubing and metering devices.

Equipment for automatically oiling loom bearings, including those of the pick mechanism, may be installed on Draper looms which are already in the mills, as well as new ones on order from the manufacturer. Among the obvious advantages of the automatic lubrication provided are: Reduction of labor and lubricant cost; the proper amount of oil is applied to the bearings at the proper time; fewer seconds caused by lubricant stains; fewer replacement parts required.



As shown in an accompanying illustration, the Bijur Type M lubricator is mounted on the loom so that it may be driven by the crankshaft and thus oil the bearings in direct proportion to the loom speed. Used in conjunction with a Bijur distribution system, this lubricator delivers the proper quantity of clean, filtered oil at a predetermined interval, under precise control to the points that require lubrication. Depending upon the loom construction, up to 73 bearings are lubricated.

Bijur Lubricating Corp., Rochelle Park, N. J.

Do you want more data? Write ◆ or use card on page 171; list 6-103

Reduces broken ends at texturing process

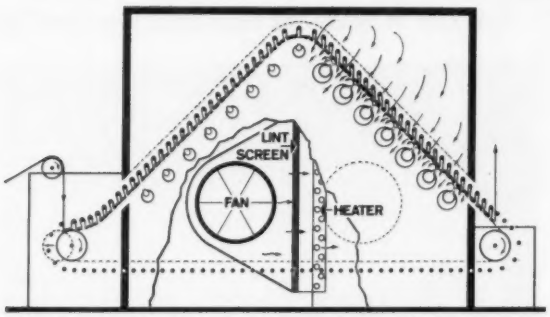
Atco Process Oil can be applied to nylon and other synthetic yarns to prevent broken ends and fly at the texturing operation. This oil may be dried right in the yarn, as it does not impart any color to the yarn or develop objectionable odors during storage. However, it can be re-

moved quite easily by simply rinsing the yarn in warm water. Atco Process Oil is usually applied by roller device attached directly to the machine.

Metro-Atlantic, Inc., Centredale, R. I.

Do you want more data? Write ◆ or use card on page 171; list 6-104

Dries up to 450 lb relaxed knit goods an hour



Path of goods through the Proctor THR knit goods dryer is shown in this cross section sketch. Note heated air movement.

From 400 to 450 lb per hr of tubular or flat knit goods may be dried on the new Proctor THR Dryer which is only 12′ 2″ wide by 17′ 2″ long by 10′ high. Tension-free handling of multiple strands of fabric is provided with continuous agitation and complete relaxation.

The material is carried on a rugged conveyor which incorporates support girts and a wire mesh underconveyor. For complete relaxation, the fabric passes over a variable speed feed roll for controlled overfeeding to the conveyor.

Recirculating heated air from direct-drive, non-overloading centrifugal fans impinges on the cloth from above, passing through the material, as shown in the accompanying illustration. Heated air also impinges on the cloth through the mesh conveyor from below, coming from multiple finger nozzles at controlled pressure and located below the conveyor.

Proctor & Schwartz, Inc., 7th St. & Tabor Rd., Philadelphia 20, Pa.

Do you want more data? Write ◆ or use card on page 171; list 6-105

Portable static detector

A light weight, portable static detecting and measuring device, known as the "Statitector," has been announced. The four-pound, battery operated instrument is designed to indicate the presence and location of static build-up at any point on a machine, thus enabling the user to determine the proper location for the installation of static eliminating equipment, and increase production and quality of material being processed.

A telescoping antenna, or probe, on the instrument is

Mr. Knitwear Manufacturer...

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YOU *Can't Afford* TO IGNORE

Here's a chance to analyze your sewing room costs . . . discover how the most modern production methods and up-to-date equipment can improve your profit picture.

The Merrow Man in your area is prepared to make a *free survey* of your sewing room operations. He will submit a report (in confidence and at no obligation) analyzing your problems and offering cost-cutting solutions.

You'll find (as others have) this service can represent dollars in your pocket, because the Merrow Man is a *skilled, experienced sewing room specialist*. He's concerned every day with finding production short-cuts . . . suggesting better methods . . . improving quality and reducing rejects.

If you'd like the opinion of an expert, write or call today telling us when you'd like a visit from

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NEW TON-TEX
COTTON CARD BELTS

DRIVE BELTS—Endless Lickerin, Doffer, Stripper and Flat.
New strength plies of special synthetic duck. Stretchless . . . vibrationless . . . no slippage. Maintain effective driving tension with no maintenance.

ROUND BANDS — Endless Rubber and Duck Ton-Tex Ply Construction.

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GREENSBORO, N. C. 1910 E. Wendover Ave.
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from thread to cloth

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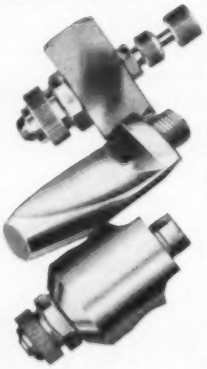
for better, faster production

Take advantage of Spraying Systems' complete choice of nozzle types and capacities, to select the EXACT nozzle to do the job best. Typical nozzles include:
PNEUMATIC ATOMIZING NOZZLES—for marking, coating and related uses. Designed for manual or automatic operation.
FLAT SPRAY NOZZLES—for washing and rinsing. Wide range of types for any required impact characteristic.
HUMIDIFYING NOZZLES—for efficient humidification and minimum maintenance. Complete units for low cost installation.



FOR COMPLETE INFORMATION write for reference Catalog No. 24

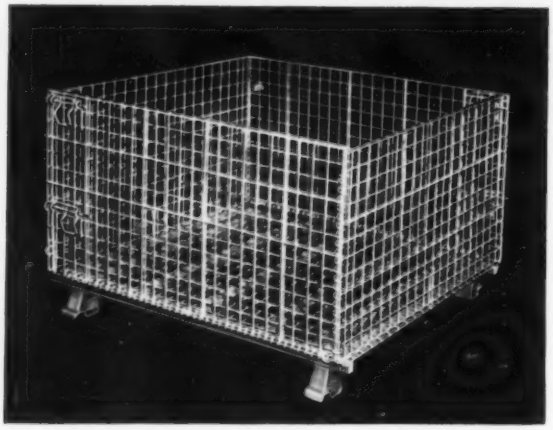
SPRAYING SYSTEMS CO.
3272 Randolph Street
Bellwood, Illinois

moved about suspect areas; the amount of static present shows on a calibrated meter scale. The spot where the greatest amount of static is indicated on the scale is the proper place for mounting a static eliminator to maintain maximum control.

Herbert Products, Inc., Woodhaven, N. Y.

Do you want more data? Write ◂ or use card on page 171; list G-106

Cuts cost of inter- and intra-plant yarn handling



Low cost, faster, and more efficient container handling of yarns on cones, bobbins, tubes, etc., is provided by the new "Scotsman" wire mesh containers.

Available in only one size (40" x 48" x 24"), the container is designed so that it may be conveniently folded down when empty and save 75 per cent of return shipping or storage space. Safe stacking type legs and 8-way lift truck entry are other construction features.

Union Steel Products Co., Materials Handling Equipment Div., Albion, Mich.

Do you want more data? Write ◂ or use card on page 171; list G-107

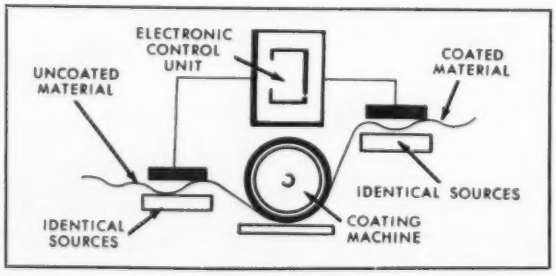
Thickness gauge accurate to .000002"

The ultra-sensitive Nuclear Thickness Gauge, Model 42000, measures:

1. Textile thicknesses to two-millionths of an inch without contacting the material;
2. Thickness of impregnations, protective coverings, and coatings to within 0.01% of total material thickness; and
3. Changes in Basic Unit Weight of .005 mg/sq cm

Use of the gauge in conjunction with automatic controls makes it possible to automatically check the thickness of textiles.

Principle of operation is as follows: Textiles flow past



a small radioactive source. The gauge measures amount of radiation passing through the textile. Changes in textile thickness cause changes in strength of radiation detected. This change is shown in units of thickness or in weight per unit area.

Gauge characteristics are: (1) a-c amplification through vibrating reed capacitor; (2) input thermostatically controlled at constant temperature; (3) preamplifier is remote from measuring point and unaffected by environment; (4) time response is continuously variable from ¼ to 30 seconds; (5) full temperature compensation; (6) single electronics unit permits detection at two separate points.

Radiation Counter Laboratories, Inc., Nucleonic Park, Skokie, Ill.

Do you want more data? Write ◂ or use card on page 171; list 6-108

New brine system saves salt

The Morton Levetrol System—a method of liquid level control in a wet salt storage system where water level automatically is proportioned to brine withdrawn—is adaptable to any wet salt storage system. It protects against salt loss due to brine overflow by balancing water level with salt level.

The system solves the problem of salt and water inventory, protects against completely drained salt storage supply, and permits complete automation of the entire water treatment system. All controls are located away from the brine storage supply to completely avoid corrosion and assure convenient, accurate salt measurement and proper brine strength at all times.

Morton Salt Co., 110 N. Wacker Dr., Chicago 6, Ill.

Do you want more data? Write ◂ or use card on page 171; list 6-109

How to up wool spinning output as much as 30%

Wool spinning frame production increase ranging from 10 to 30 per cent, depending upon the stock and blend run and on specific conditions in the mill, is an outstanding benefit to be derived by installing balloon control rings on the machine.

Others are: (1) yarn damage caused by yarn whipping the separator is reduced; (2) much smoother traveler action and consequently improved ring wear and life.

Adaptable to any make of wool ring spinning frame,

JENKINS PRODUCTS —

ENGINEERED FOR PROGRESSIVE MILLS

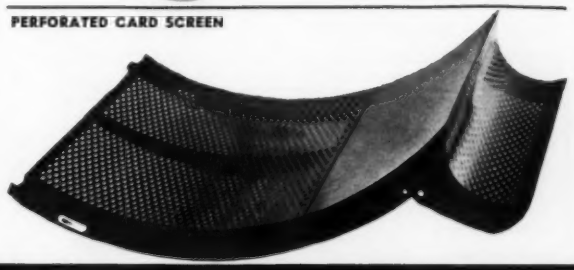
Today, more and more, Textile leaders are demanding JENKINS ENGINEERED PRODUCTS, machined on exclusive Jenkins equipment to give smoother performance and more uniform yarn quality.

For instance, JENKINS Spinning Cylinders and Card Screens are engineered by men who for the past 45 years have pioneered in *engineered metal products* . . . for mills that have moved constantly forward with higher quality at lower cost.

Ask to see the newest brochure on our complete line of Services in the Metal Fabricating Field.

RIBBED TYPE CARD SCREEN

PERFORATED CARD SCREEN



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JENKINS METAL SHOPS, Inc.

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GASTONIA, NORTH CAROLINA

WHITINSVILLE, MASS.
H.J. THEILER CORPORATION
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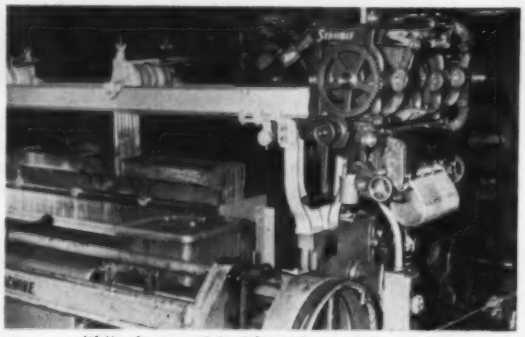
THE STAUBLI HEAD
ON THE WARNER & SWASEY
WEAVING MACHINE —
20 Harnesses — 230 p/min!



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Padding
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Grays and Rubber
Wash Blankets

Removes:
Oil
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a powerful emulsifier for grease and oil
a thorough cleansing agent for all fabrics

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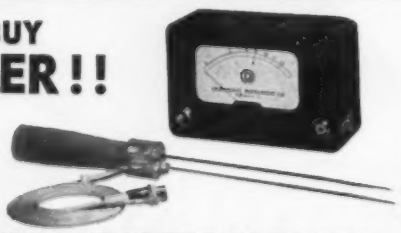
WATER!!



TEST MOISTURE CONTENT OF BALED COTTON EASILY WITH

DELMHORST MOISTURE DETECTOR

Now you can test 100 bales in less time than it takes to prepare one oven sample. Detector is battery operated, requires no maintenance. Complete details on request.

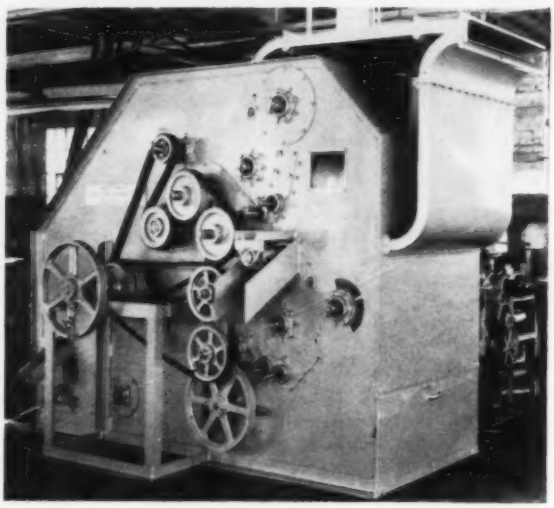
DELMHORST INSTRUMENT CO.
458 Cedar St.
Boonton, New Jersey

the rings can be wound down by a hand crank to the ring rail, so that they are completely out of the way of doffers. Design of the ring is such that it can be easily threaded and can be run with reverse twist without being turned over or repositioned.

Whitin Machine Works, Whitinsville, Mass.

Do you want more data? Write ◂ or use card on page 171; list G-110

Opener-cleaner offers no fly, parts accessibility



Completely enclosed design which eliminates fly and ready accessibility to individual cylinders and all other internal parts are advantages provided by an improved version of the SRRL Opener-Cleaner. Called the Davidson-Kennedy Opener-Blender-Cleaner, the new machine offers all of the advantages of the first model (TI for July, 1958, page 139) without increase in nep count or decrease in break factor.

Cleaning efficiency of the machine runs from 30 to 50 per cent, depending on the type of stock. It is efficient in the removal of pepper trash, and removes leaf without pulverizing it to pepper trash. Cotton is improved from one-half to as much as two grades, depending on the nature of the stock being processed.

In most cases, a decrease in over-all waste should be obtained. For an average of all cottons, about 2.5 per cent waste is removed, of which 87 per cent is foreign matter and 13 per cent lint. An increase in spinning efficiency can generally be expected because of the cleaner and more open condition of the stock.

Sides are constructed of one plate, and top and ends are covered, completely enclosing all working parts.

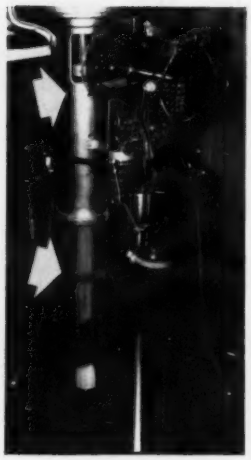
Flange bearings supporting the rolls are mounted on face plate so that by removing bolts from face plate, each individual cylinder may be removed as if it were a plug. If an individual roll or grid bar is damaged, it is not necessary to dismantle the entire machine in order to repair it.

The doffer brush has been redesigned as a cage type fan and acts as its own doffing fan. This eliminates the necessity of proper drafts being supplied by succeeding condensers and makes the machine adaptable to air type cleaning.

Davidson-Kennedy Co., 1090 Jefferson St., N. W., Atlanta 18, Ga.

Do you want more data? Write ◂ or use card on page 171; list G-111

Draw down device for older seamless machines



Now available for use on older models of ladies' seamless hosiery knitting machines is a vacuum draw down device which applies from 6 to 8 oz of pull on the stocking while it is being knitted. Completed stockings are automatically pulled into a box.

All parts of the attachment (except the air handling equipment) are made of Plexiglas.

Vac Rite Mfg. Co., Div. of Plastic Industries, Inc., Athens, Tenn.

Do you want more data? Write ◂ or use card on page 171; list G-112

Magnet protects card and garnett clothing

A new magnet for use in spiked apron feeders eliminates damage to cards and garnetts, and fire hazard due to tramp metal in the wet or dry fibers being processed.

The magnet is mounted on a light weight, non-magnetic frame of riveted and welded construction. It is easily installed in virtually any machine. A special protective cover prevents iron accumulation on back of magnet castings and keeps dirt out of machinery.

Additional features include lift handles that swing back for easy cleaning, strength of magnet guaranteed for mechanical life of machine on which it is mounted, and no maintenance or outside power required.

Magni-Power Co., Wooster, Ohio.

Do you want more data? Write ◂ or use card on page 171; list G-113

Lint-free textile type motor

A totally-enclosed, fan-cooled motor for use in lint-filled atmospheres features a smooth, self-cleaning frame devoid of dust-catching ribs. The open fan shield design permits free movement of lint, preventing it from hanging up on the air openings.

Lint does not work its way into the motor windings or interfere with cooling. The fan directs the flow of air over the smooth housing to give cooling and self-cleaning action, eliminating need for separate cleaning by compressed air. Housing of heat-treated alloy of aluminum gives the additional benefits of fast heat transfer for cool running, good corrosion resistance, and light weight.

Electra Motors, Inc., 1110 No. Lemon St., Anaheim, Calif.

Do you want more data? Write ◂ or use card on page 171; list G-114

NITRIDED SPINNING AND TWISTER RINGS

REVERSIBLE and NON-REVERSIBLE 8 and 10 mm, curved and straight Webb SPINNING RINGS

REVERSIBLE and PLAIN TWISTER RINGS

R+F

NITRIDED Rings with a surface hardness of 67 to 69°C Rockwell have greater resistance to wear . . . and are practically FREE from corrosion.

Accurate Profile

Mirror-like Finish

For Longer Life— Fewer Ends down— Increased Spinning & Twisting Production— Improved yarn Quality

USE R+F **NITRIDED SPINNING and TWISTER RINGS**

TEXTILE SUPPLIES W D USED MACHINERY

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Put your capital to work...

FULL TIME

Your capital can produce maximum profits only if you give it the chance for maximum turnover.

You can release capital tied up in accounts receivable and accumulated seasonal inventories through FACTORING — the time-tested method of stimulating capital turnover and of controlling the vital cash flow.

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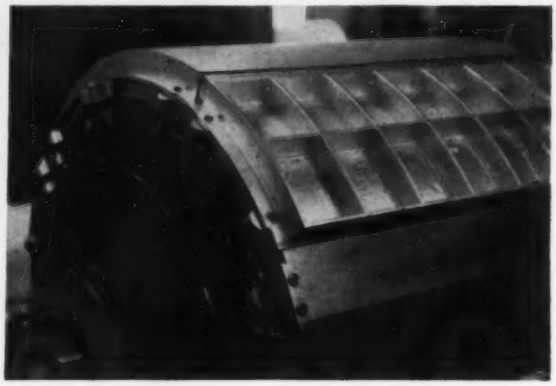
ONE COILER EXCELS!

McDONOUGH

There are more McDonough large coilers in use than any other make. Try one in your mill without obligation and learn why.

McDONOUGH POWER EQUIPMENT, INC.
McDonough, Georgia, U.S.A.

SRRL "granular" top for cards is now available



Commercial availability of the "granular" attachment (TI for May, 1959, page 78) for cotton type cards has been announced. Called the "Gran-O-Top," this development of the USDA Southern Regional Research Laboratory replaces the flats and provides the advantages of minimum care and maintenance, lower weight (200 pounds), complete elimination of flat stripping waste, and lower cost of operation. (For description, see Cotton Research Clinic report beginning on page 74.)

The attachments are sold as complete conversion units for standard cards and include the SRRL-developed licker-in cover and roll which materially reduce air currents and fiber loss.

When cards are equipped with both the granular top and Booth "Micr-O-Grind" needle point card clothing, nep count is reduced, stripping cycles may be extended to from 8 to 24 hours, less stripping waste is made, and fly is eliminated by the completely closed construction.

Benjamin Booth Co., Allegheny Ave., & Janney St., Philadelphia 34, Pa.

Do you want more data? Write ◂ or use card on page 171; list G-115

Textured yarn aid—ceramic spindle head wheels

More even-bodied "Fluflon" textured yarn is produced when the Heanium spindle head wheel is utilized, as the wheel never turns. Another advantage of this recently announced ceramic item, which fits into the head of the false twist spindle of the Universal Model 994 attachment for uptwisters, is the fact that only one wrap of yarn is required.

Also available is an equally advantageous Heanium spindle head wheel for the Universal No. 550 "Superloft" textured yarn machine.

Heany Industrial Ceramics Corp., Box 530, New Haven, Conn.

Do you want more data? Write ◂ or use card on page 171; list G-116

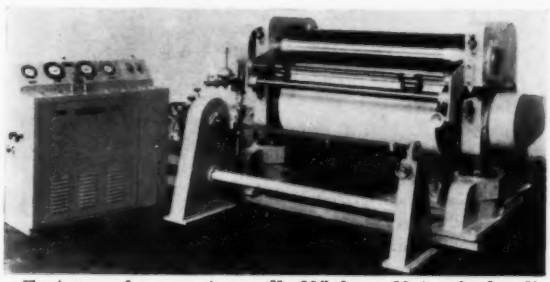
Special cone for bulked yarns

A 9° 15′ tapered paper cone for bulked yarns has a special lacquered tip which is impervious to coning oils. The smooth paper has the Unitex surface to prevent snagging and maintain better delivery of yarn at knitting and other machines.

Sonoco Products Co., Hartsville, S. C.

Do you want more data? Write ◂ or use card on page 171; list 6-117

Calender offers 2-motor drive, balanced loading



Features of a new two-roll, 60"-face, 60-ton hydraulic friction calender are:

1. Two-motor drive for variable speed and variable friction.
2. Balanced loading is provided by a new kind of hydraulic pressure system.
3. New type gas unit for heating top steel roll.
4. Automatic constant temperature control by direct contact with one end of roll face.
5. Seams are jumped automatically.
6. Automatic oil circulating system provides cool, clean oil to top and bottom roll bearings.

B. F. Perkins & Son, Inc., Holyoke, Mass.

Do you want more data? Write ◂ or use card on page 171; list 6-118

Portable rug shear gives more even surface

Recently placed on the market was a portable rug shear that is particularly adapted to shear the pills and give a more even surface to nylon carpeting. Weighing only 90 lb, the easy-to-handle-and-operate machine is equipped with a light that throws a beam directly onto the surface of the carpet or rug in front of the shear as it is being moved, helping the operator to do a good job.

Height of the cut can be adjusted by the regulating knob that extends through the top of the glass fiber

First from BALTIMORE

In 1784, in BALTIMORE, **EDWARD WARREN** a 13-year old boy was the FIRST human in this country to make a **BALLOON ASCENSION...** probably from the vicinity of the Washington Monument.

Courtesy — The Baltimore News-Post

— also from Baltimore...

YOUR *First* CHOICE IN BLACKS

- DIRECT
- ACID
- DEVELOPED
- ACETATE
- FORMALDEHYDE
- LOGWOOD

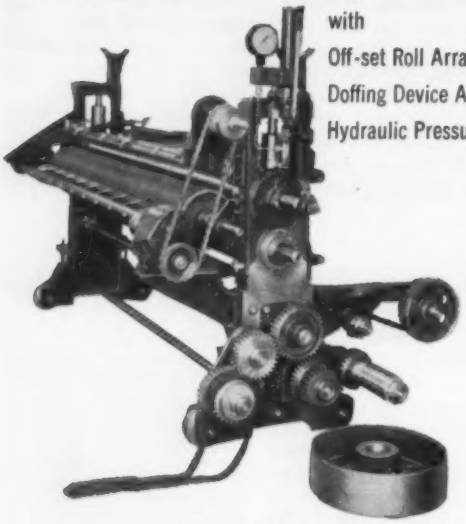
THE HOUSE OF BLACKS

Consult your local dyestuff distributors for information and samples. Shipments can be made from our Baltimore factory.

YOUNG ANILINE WORKS, INC.

OFFICE AND FACTORY: 2701-2733 BOSTON STREET • BALTIMORE 24, MARYLAND

NEW "LIGHTWEIGHT" PERALTA® MACHINE



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Off-set Roll Arrangement
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Hydraulic Pressure

Write for information.

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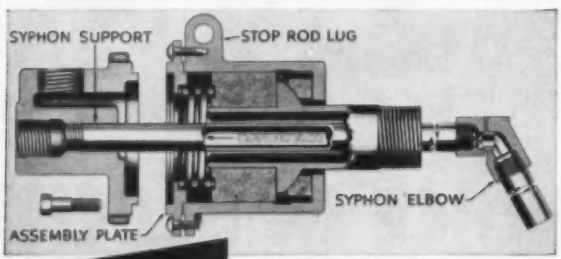
Main Street Jefferson, Mass. P.O. Box 25

TRY THIS on your Dry Cans and 30" Slasher Cylinders

We'll gladly furnish a pair of these units for 90-day obligation-free trial in your mill. The Type SB2P is self-supporting, completely packless, needs no lubrication or adjustment. The Johnson Syphon Elbow permits the use of two straight pipes instead of an unwieldy curved syphon pipe, is hinged to pass right through the joint.



Johnson ROTARY PRESSURE Joints
First in the Textile Industry

Write for Catalog S-3002

Shows self-supporting Johnson Joints for all needs . . . on print cans, calenders, compressive shrinkage ranges, big 5' and 7' cotton slashers, dry cans, etc.

THE JOHNSON CORPORATION
815 Wood St., Three Rivers, Mich.

hood which confines the lint particles so the suction will carry them into the dust-proof bag. The revolver is 10" wide and has an adjustable revolving brush roll in front of the cutting parts to help brush up the pills for shearing.

Curtis & Marble Machine Co., 72 Cambridge St., Worcester 3, Mass.

Do you want more data? Write ◂ or use card on page 171; list 6-119

Battery-powered sweeper for congested areas

A new 33" wide, battery-powered, walk-behind sweeper, known as the Tennant Model 40-E, is self-propelled and specially designed for congested areas.

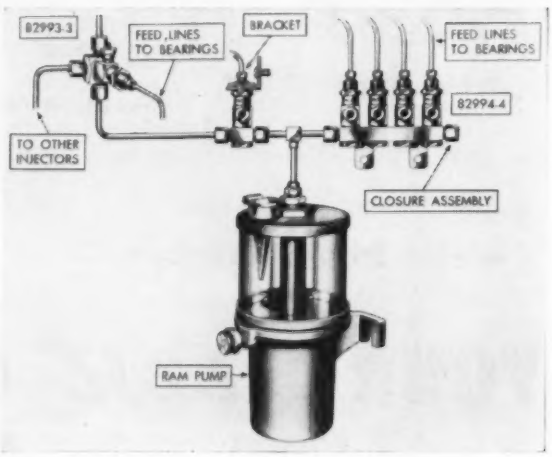
Equipped with a cylindrical 26" main brush and a 17" rotary side brush, the machine cleans a 34" path. At top speed (1.9 mph) it has a capacity of about 25,000 sq ft per hour.

Finger-tip controls are located on machine handle. To run the machine, operator flips on motor switch, releases brush-lift lever, then depresses right steering handle slightly to engage clutch. Machine stops automatically if handle is released.

G. H. Tennant Co., 721 North Lilac Dr., Minneapolis 22, Minn.

Do you want more data? Write ◂ or use card on page 171; list 6-120

Replaces the "oiler," eliminates dripping



A new miniaturized injector system for automatic lubrication of textile machinery has been introduced. Called the Micro-Measure System, it pre-measures and injects fluid lubricants to "millionths of an ounce" in automatic cycles as often as every minute.

An automatically controlled, air-operated pump supplies refinery-pure lubricant to small, economical injectors with micro-meter adjustment—at a predetermined rate, in quantities as small as 1/135 of a drop (200 millionths of an ounce). The system is said to maintain

a constant, uniform oil film on all bearing surfaces with no overflow and no dripping.

Lincoln Engineering Co., Industrial Division, 4010 Goodfellow Blvd., St. Louis 20, Mo.

Do you want more data? Write ◆ or use card on page 171; list G-121

New finishes and chemicals

A new corn dextrin for finishing, Stadex Dextrin 55, provides the desired hand on a variety of fabric constructions ranging from sheetings to drills. It penetrates well into the fabric and does not glaze or mask colors. The product is compatible with most starches, gums, and latices.

A. E. Staley Mfg. Co., Decatur, Ill.

Do you want more data? Write supplier or use card on page 171; list G-201

A finish for ladies hosiery, designated V-12, produces excellent delustering, gives improved appearance, and reduces production costs. Especially designed for use in mills where a belt, tray, or air dried process is employed, the product is also quite effective on conventional boarding equipment. When used in conjunction with other finishes marketed by its manufacturer, this product gives exhausting properties to the entire finish bath.

W. F. Fancourt Co., 516 S. Delaware Ave., Philadelphia 47, Pa.

Do you want more data? Write supplier or use card on page 171; list G-202

A white discharge printing compound, Eccoblanc W-40, contains its own resin binder. Non-curing and non-yellowing, the compound is rated good in resistance to washing and drycleaning and excellent in covering power. Sharp and permanently white prints are assured when the product is used.

Eastern Color & Chemical Co., 35 Livingston St., Providence 4, R. I.

Do you want more data? Write supplier or use card on page 171; list G-203

Permanent protection of fabrics from bacteria is obtained with "Eversan," a new product that fixes an organic zinc ingredient in the fiber of a fabric. The treatment not only resists the growth of odor-forming bacteria but also provides life-lasting protection against a broad spectrum of other bacteria. Recommended for application to fabrics for wearing apparel, sheets, pillow cases, handkerchiefs, etc., the product is non-toxic, nonirritating, colorless, odorless. Hand of fabric is improved, while strength is not affected.

Yardney Chemix Corp., 46 Leonard St., New York, N. Y.

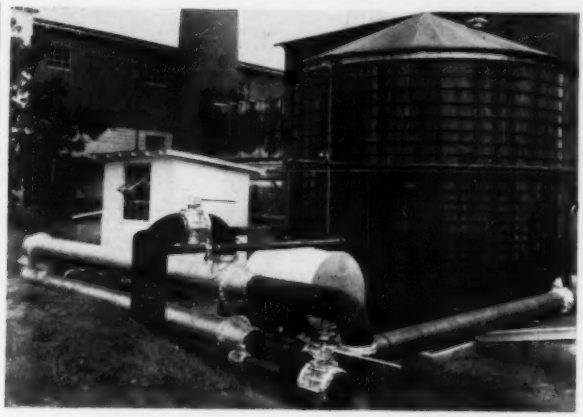
Do you want more data? Write supplier or use card on page 171; list G-204

A cationic softener for synthetic and natural textiles, CA-100 Textile Finishing Agent, is a substantive lubricant of high spreading and penetrating power. It gives excellent and uniform softening without lowering tensile strength, has good resistance to yellowing, has little chorine retention, and is compatible with typical resin finishes. Material treated with the product shows no spottiness when dyed with heavy shades or dark colors, and light fastness is retained, even on pastel shades. This softener is particularly effective for package dyeing.

W. R. Grace & Co., Washington Research Center, Clarksville, Md.

Do you want more data? Write supplier or use card on page 171; list G-205

Level dyeing of goods containing polyester fibers is ob-



FAIRFOREST SAVES MONEY ON FUEL BILL WITH APCO HEAT RECLAIMER

Through the installation of an APCO Heat Reclaimer in the Fairforest Finishing Division of Reeves Brothers, an estimated 25%-30% savings in the fuel bill resulted.

An equivalent of an additional 30,000 to 35,000 pounds of steam per hour was made available to Fairforest by the APCO System, accounting for the fuel savings.

THE HIGH VELOCITY NON-CLOG APCO DESIGN CAN SAVE YOUR PLANT MONEY!

By reclaiming the heat from waste effluent, the APCO Heat Reclaimer can save *you* money also, while increasing the capacity of your boiler by 30%.

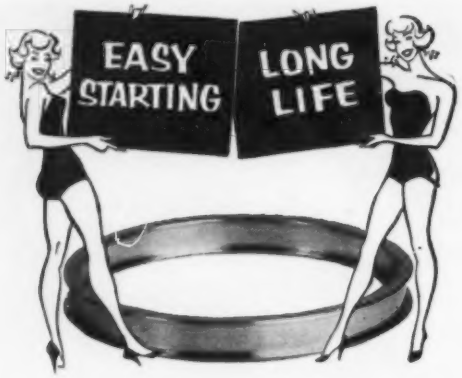
Depending on the amount of hot effluent you are presently wasting, the APCO Reclaimer will probably amortize itself in one or two years. From then on, the profit's all yours.

Ask your plant engineer about the value of heat in your own waste water, and write for details on other APCO installations today.

APCO

AGENTS IN MAJOR TEXTILE MANUFACTURING CENTERS

APPLIED ENGINEERING COMPANY
INCORPORATED
ORANGEBURG, S. C.



Why settle for one without the other?

Easy Starting is often over-sold because it can immediately be recognized and enjoyed. But Long Life, which takes time to prove out, is of course far more valuable. DIAMOND FINISH rings last extra long — that is an historical fact. They are also the easiest starting rings consistent with assured smooth running over a long life.

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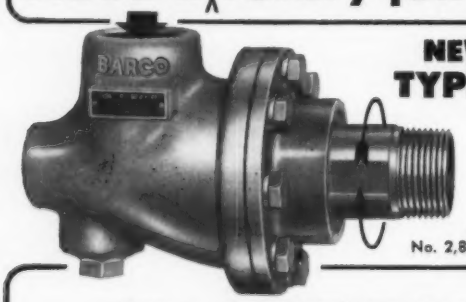
Rep. for the Carolinas & Va.: W. K. SHIRLEY, P.O. Box 406, Belmont, N. C.
Rep. for Ala., Ga. & Tenn.: H. L. WILLIAMS, Box 222, West Point, Ga.

Need a *Better* rotary joint?



NEW TYPE C

Patent No. 2,836,439

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For countless applications, Barco's new Type C Rotary Joint will give you the best operating records you've ever had—*and for LESS COST!*

"CRACK-FREE" CHROME PLATED SLEEVE—A standard Barco feature. Minimizes corrosion, friction, wear. Stainless steel spring also standard.

RESISTS SEAL RING BREAKAGE—The spherical seal ring is under compression, not *tension*, loading. Self-adjusting for wear. Seal withstands shock loads and alternating hot and cold service.

WIDE SPACED BEARINGS—Two, instead of one . . . increased bearing area. No lubrication required. Lowest friction.

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tained with "Levapal," a complex modified anionic surfactant. Based on the weight of the polyester fiber present in the goods, 2 per cent of Levapal is used to paste the disperse dye.

Also available for use in the preparation of goods containing polyester and other fibers is a modified solvent-free surfactant, "Tanapon" X-70. It removes more waxes and fatty matter than other similar products.

The Tanatex Chemical Corp., Belleville Turnpike, Kearny, N. J.

Do you want more data? Write supplier or use card on page 171; list G-206

A new print thickener, Stadex Dextrin 150, has been developed especially to improve cold-flow properties of print pastes containing corn starch. Reduced penetration of such pastes assures high tinctorial values and ease of removal. The product can be used with dyestuffs requiring alkaline conditions, but is not suitable for printing fast-color salts and bases on naphthol-prepared cloth.

A. E. Staley Mfg. Co., Decatur, Ill.

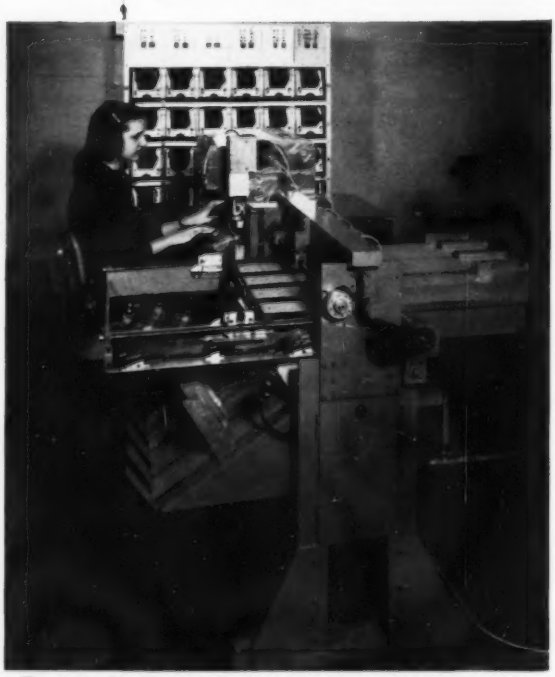
Do you want more data? Write supplier or use card on page 171; list G-207

Semi-durable water repellency for any fabric is provided by Eccopel Water Repellents A and B which together form a two-component package for single bath application. Use of a catalyst and curing are not required. Under high speed operation no foaming occurs.

Eastern Color & Chemical Co., 35 Livingston St., Providence 4, R. I.

Do you want more data? Write supplier or use card on page 171; list G-208

Jacquard card cutter works from sketch



For use in Jacquard design departments is an electronically operated card cutting machine which punches cards directly from sketches, eliminating the need for accurate designs and thus saving the time and labor

ordinarily required to produce them. Production is 300 to 400 cards per eight-hour shift. An original and three duplicate sets of cards may be produced simultaneously.

The sketch is placed on the scanning table. While the machine scans, an operator closely follows it and manually presets the keys to punch the cards.

Garden State Looms, P. O. Box J, Allendale, N. J.

Do you want more data? Write ◂ or use card on page 171; list G-122

Automatic, continuous cloth width measurement

An electrical device that gives continuous and automatic indication of cloth width measurements without interrupting machines, and which actuates an alarm if pre-set tolerances are exceeded, is now available. Optional with this measuring system is a recorder that prints a continuous width record, which may be attached to the cloth roll for use at subsequent operations.

Compact and simple to install, the Margin Meter is advantageous where yardstick measurement requires frequent machine stopping.

The instrument consists of a measuring unit and an indicator which gives an instantaneous width reading as the cloth passes. Plugged into a 115-volt a-c outlet, the apparatus is ready to operate after setting a selvage allowance dial and two tolerance pointers.

Matrix Controls Co., Inc., P. O. Box 22, Somerville, N. J.

Do you want more data? Write ◂ or use card on page 171; list G-123

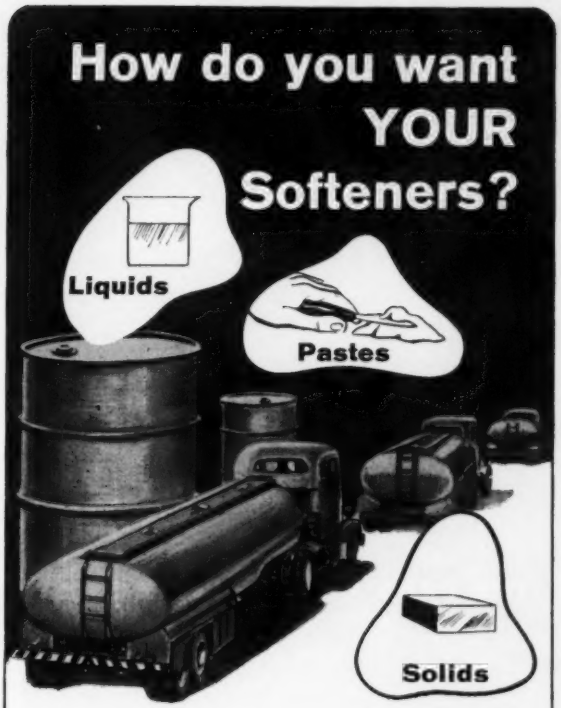
Cloth guider with built-in transformer-rectifier

An electric cloth guider now on the market is a self-contained unit—that is, the transformer and rectifier are mounted on one of the pair of guider units and the other connected to it by a cross-over wire. Necessity for mounting the transformer-rectifier unit on the floor near the guiders and use of long wires to connect them are eliminated.

Thus, installation is simplified—all that is needed is a conventional 110-volt a-c outlet near one of the guiders to accommodate the standard transformer-rectifier plug. Also, danger of wires being broken or jerked off the terminals is reduced.

Guider, Roll & Service Co., P. O. Box 3747, Peninsula Station, Daytona Beach, Fla.

Do you want more data? Write ◂ or use card on page 171; list G-124



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The fine line of Moretex Softeners includes several outstanding polyethylenes, epoxy types, solubilized stearamides, stearic acid amines, synthetic non-ionic esters, saturated fatty esters, and non-oxidizing hydrocarbons. They are readily water soluble in all consistencies. Expert technical service is available to help you select the correct softener or to develop special softeners for unusual applications.

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SPECIALISTS IN DRYING AND STATIC ELIMINATION.

Equipment briefs

Safer, more efficient belt dressing. A new belt dressing in aerosol form, called "Sprazon," can be sprayed safely onto moving Vee, rubber, and leather belts. Other benefits are: more convenient and economical; no loss of power or production; and operator can control the amount applied. Application is accomplished by holding the can 12" to 15" from the pulley while the drive is running. Rotation of pulley transfers film of belt dressing to inner surface of belt.

Graton & Knight Co., Worcester 4, Mass.

Do you want more data? Write supplier or use card on page 171; list G-209

Flat atomized spray from hydraulically-operated nozzle. A new series of atomizing nozzles for spraying operations which require a flat atomized spray at exactly controlled and extremely low volume is available. Advantage of the 0011 Series Flat Atomizing Nozzles is that a high degree of uniform atomization is obtained by hydraulic pressure alone—a pneumatic connection is not required. Typical applications include continuous mixing and coating operations where only extremely small quantity of liquid per unit time is desired. At 40 pounds pressure, rated capacity of the nozzles is 2/3 gal per hr.

Spraying Systems Co., 3201 Randolph St., Bellwood, Ill.

Do you want more data? Write supplier or use card on page 171; list G-210

A block-type deodorant called Ozlab uses chlorophyll as the deodorizing medium. The block holders (silver-colored metal) are easy to attach anywhere.

Acme Chemical Products Co., Div. of The Selig Co., P. O. Box 1518, Atlanta 1, Ga.

Do you want more data? Write supplier or use card on page 171; list G-211

Electric yarn tension unit applies up to 100 grams. Now available for application to warper creels, winders, quillers, knitting machines, etc., on which tire cord and yarns such as rubber, glass, and carpet are processed, are two new models of the Lindly Electrotense electromagnetic yarn tension units. With the addition of Models 413 and 414, a range of tensions from almost 0 to over 100 grams is available.

Lindly & Co., Inc., 248 Herricks Rd., Mineola, N. Y.

Do you want more data? Write supplier or use card on page 171; list G-212

Measure Color of Fabrics with Highly Directional Surface. A spinner-type sample holder for "Color-Eye" colorimeters (manufactured by Instrument Development Laboratories) makes it possible to measure the reflectance of colored samples of corduroy, gabardine, tricot, etc., with directional weave. A manually spun flywheel with concentric retaining rings for mounting the samples, the device also permits measurement of the color of yarns wound on cards.

Instrument Development Laboratories, Inc., 67 Mechanic St., Attleboro, Mass.

Do you want more data? Write supplier or use card on page 171; list G-213

Automatic Yarn Filament Counter. Now available to mills in this country a counting device, designed and developed by the British Rayon Research Institute, which automatically counts in a few seconds the number of

filaments in an end of yarn. A small section of the yarn is inserted into the counter unit of the instrument, and a lever is released. The lever is attached to a knife blade and a transducer. As each filament is cut by the blade, the vibrations are picked up by the transducer and instantaneously counted.

Fabrionics Corp., P. O. Box 521, Huntington, L. I., N. Y.

Do you want more data? Write supplier or use card on page 171; list G-214

A positive clutch drive for uptwister feed rolls makes it possible to run exceptionally heavy yarns at very low twist and high speeds. Driving gears in permanent mesh, split shaft, and a specially-engineered type of free engaging clutch are construction features.

Fletcher Works, Inc., 2nd & Glenwood Ave., Philadelphia 24, Pa.

Do you want more data? Write supplier or use card on page 171; list G-215

An industrial fan wheel (wool wheel), especially designed for exhausting air containing clinging-type fibrous material such as wool, cotton, rayon, etc., is made in wheel sizes ranging from 9½" to 60½". Constructed with a heavy back plate, fins and steel spider, the wheels are capable of moving, depending on need, 200 to 50,000 cfm of air at static pressures up to 15 inches. They are made in two classes for temperatures ranging up to 1000 F.

Chicago Blower Corp., 9867 Pacific Ave., Franklin Park, Ill.

Do you want more data? Write supplier or use card on page 171; list G-216

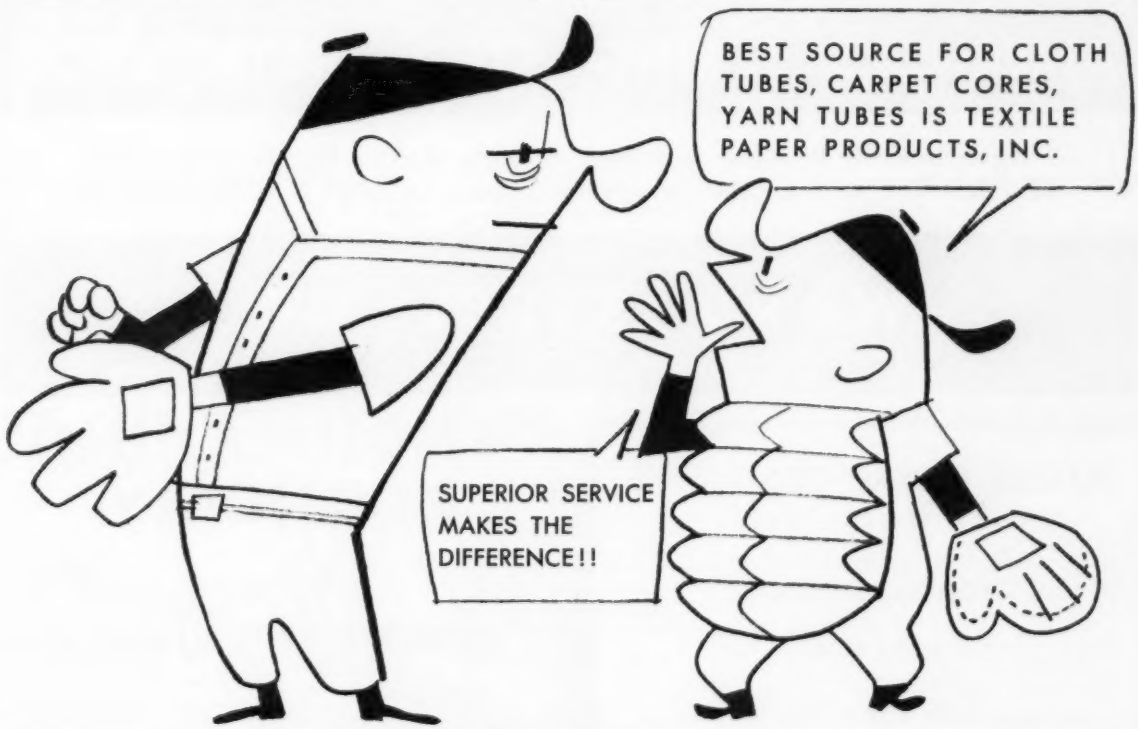
A mechanized filing unit, designed specifically to simplify and speed office operations requiring reference to large numbers of index cards, records, master punched cards, and the like, is offered in four standard models that may be modified as to height, width, or both, to suit customer requirements—as many as 75 different sizes

and capacities are available. The Kard-Veyer units provide a push-button selector to enable the operative to bring a desired tray of cards to proper working level without leaving her seat.

Remington Rand, Div. of Sperry Rand Corp., 315 Fourth Ave., New York 10, N. Y.

Do you want more data? Write supplier or use card on page 171; list G-217

An external starter lockoff is now a standard feature of Square D manual starters in general-purpose enclosures. Designed to provide extra safety, the lockoff makes it possible to lock the starter in the "off" position without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removing the cover. All such general-purpose manual starters are furnished with both an internal lockoff on the operating mechanism, and an external lockoff that combines both the cover lockout and button lockoff features.

Square D Co., 4041 N. Richards St., Milwaukee 12, Wis.
Do you want more data? Write supplier or use card on page 171; list G-218

A cloth storage rack accommodates two rolls of cloth, supported by standard center bars. The second roll is stored behind the roll that is letting off to continuous roll feed unit. When the first roll runs out on the Redi-Roll and the core has been removed, the operator presses a foot release and the second roll automatically rolls along guides into position in self-locking clamps. Roll changing is speeded up by automatic ejection of the center bar from the self-locking clamps when the operator presses a second foot release.

Mount Hope Machinery Co., 15 Fifth St., Taunton, Mass.
Do you want more data? Write supplier or use card on page 171; list G-219

New Books

French textile manufacturing techniques of the 18th Century, before mechanization, are portrayed in the new *Diderot Pictorial Encyclopedia of Trades and Industry* (Dover Publications, Inc., 180 Varick St., New York 14, N. Y. Price of the 920-page two-volume set, $18.50). The 55 plates dealing with textiles show spinners, weavers, dyers, and other craftsmen using methods that were to be made obsolete in the space of a generation. Several plates are devoted to the method of making the Gobelin tapestries and passementerie, while others portray the most advanced spinning and weaving equipment and other textile machinery of that time. Among other subjects dealt with in this reprint of 485 full-page plates from the original work are: paper and printing, fashion, scientific instruments, bookbinding, and glass blowing.

Friction in Textiles is the title of a recently published book for research workers studying the theoretical aspects of friction in fibers and for textile technologists in the mill who have to deal with production difficulties due to friction. Part 1 deals with theory in friction and lubrication; Part 2, with practical problems in textile processing; Part 3, main methods and techniques used in measuring friction, yarn tension, and abrasion. Textile Book Publishers, Inc., a division of Interscience Publishers Inc., 250 Fifth Ave., New York 1 N. Y. (price, $6.75).

Three aids have recently been made available for those who teach, study, or work with textiles: (1) *Fabric Science* (price $3.75) contains 75 illustrated problem-solving projects covering fabrics from fiber to finish and 400 questions on fabric fundamentals; (2) for use with the aforementioned book a box of about 300 swatches (2" x 2") of fabrics in separate glassine envelopes (price, $5.00); and (3) for use of teachers and students on a self-study basis, a book entitled *Fabric Science Manual* (price, $2.25) which contains the answers to the 400 questions mentioned previously. Author of the books is J. J. Pizzuto, an instructor at the Fashion Institute of Technology. Available from Textile Press, Box 173, Pelham, N. Y.

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FREE BOOKLETS

7-1 CHAIN DRIVES FOR PICKERS. Brochure describes new main driving shaft chain drive and fluted calendar roll chain drive for Saco-Lowell Picker. Southern Gear Works, Inc., P. O. Box 1031, Gastonia, North Carolina.

7-2 HIGH PRESSURE LUBRICATORS. Booklet tells how accurate control of oil-feed with high distributing pressure may be achieved. Unit serves large or small number of bearings requiring closely controlled oil-feed. Bijur Lubricating Corporation 151 W. Passic Street, Rochelle Park, New Jersey.

7-3 D C MAGNETIC BRAKES. Booklet contains selection charts for matching brakes to sepecific motors and explains in detail the construction features. The Electric Controller & Mfg. Co. Division of Square D Company, 4500 Lee Road, Cleveland 28, Ohio.

7-4 MICRO-FOG LUBRICATION. Brochure contains reprints of articles on Micro-Fog which have appeared in seven leading trade journals. C. A. Norgren Company, Englewood, Colorado.

7-5 ENKA NYLON. Booklet is a report to knitters on a new and different type of nylon. Describes its advantages in various types of fabrics. American Enka Corporation, 530 Fifth Avenue, New York 36, New York.

7-6 GEARMOTORS, MOTOGEARS AND FLUID DRIVES. Booklet describes the functions of these various types of drives and provides detailed technical data. Link-Belt Company, Dept. PR, Prudential Plaza, Chicago 1, Illinois.

7-7 TENN-ACID 855. Two new booklets containing technical information on the use of this modified alkyl aryl sulfonic acid for textile and allied industries. Tennessee Corporation Marketing Research and Development Department, 1330 West Peachtree, Suite 500, Atlanta 9, Georgia.

7-8 LIGHT WEIGHT CONVEYOR. Brochure describes light weight low priced bale handling conveyor. Includes operational data and specifications. The Red Cross Manufacturing Company, Bluffton, Indiana.

7-9 TEXTILE MOTORS. Brochure describes totally enclosed non-ventilated motors for textile mills which eliminate lint hazards and maintenance problems. General Electric Company, Fort Wayne, Indiana.

7-10 VEEDER-ROOT COUNTER. Bulletin describes various counters including High Speed Electronic Counters as well as those mechanically and hand operated. Veeder-Root, Inc., Hartford 2, Conn.

7-11 "COTTON SPECIAL" LIFT TRUCK. Booklet gives details of lift truck designed exclusively for the cotton and textile industries. Outlines performance and design characteristics. Hyster Company, 1003 Myers Street, Danville, Illinois.

7-12 BINDER FOR NON-WOVEN FABRICS. Bulletin covers various aspects of non-woven manufacturer with emphasis upon binder selection, compounding, etc. B. F. Goodrich Chemical Co., 3135 Euclid Ave., Cleveland 15, Ohio.

7-13 FIBRONAIRE. Brochure describes instrumentation for faster and more accurate testing of bulk staple fiber fineness. Motion Control, Inc., 1905 Plantation Road, Dallas, Texas.

7-14 INDUSTRIAL FLOORS. Booklet describes the proper methods of cleaning and care of industrial floors. Lists cleaning compounds, gives descriptions of cleaning methods. Oakite Products, Inc. 126C Rector St., New York 6, New York.

7-15 BETTER PACKAGING & SHIPPING. Catalog contains ideas for improving packaging and shipping methods and contains complete line of strapping, tools, and equipment. Signode Steel Strapping Co., 2600 North Western Avenue, Chicago 47, Illinois.

7-16 PLASTICS MOLDING. Folder describes and illustrates plastic products for textile and industrial users. Southern Plastics Engineering Corp. P. O. Box 6428, Greensboro, N. C.

7-17 TASLAN TEXTURED YARNS. Brochure tells how standard textile yarns can be textured from cakes, cones, pirns, spools, etc., to 10" traverse, 10" diameter packages. U. S. Textile Machine Company, Scranton 8, Penna.

7-18 TRICOT & RASCHEL BEAMS. Booklet describes aluminum alloy beams with 30" diameter forged heads. Includes specifications and construction information. Milton Machine Works, Inc., Milton, Pa.

7-19 POWER TRANSMISSION DIGEST. Booklet contains brief but comprehensive review of line of power transmission machinery. Bulletin A-706. Dodge Manufacturing Corporation, Mishawaka, Indiana.

7-20 WASTE TREATMENT. Book presents complete sanitary engineering and equipment line of water, sewage and industrial waste treatment. Link Belt Company, Dept. PR, Prudential Plaza, Chicago 1, Ill.

7-21 HYDRAULIC PACKING. Brochure contains engineering data on homogeneous and fabric reinforced hydraulic packings. Crane Packing Company, 6400 Oakton St., Morton Grove, Ill.

7-22 AIR HEATERS. Data sheet describes various air heaters, including details of construction and application data. Maxon Premix Burner Company, Muncie, Indiana.

BOOKLETS

raw stock to roving

T-101 Lummus Pepper-Shaker Opener. Gives complete details and photographs. Aldrich Machine Works, P. O. Box 750, Atlanta, Ga.

T-102 Static Elimination. How to eliminate static safely and inexpensively. Simco Co., 920 Walnut St., Lansdale, Pa.

T-103 Card Grinding Information. Care and operation of cards. B. S. Roy & Son Co., Worcester, Mass.

T-104 Card Clothing. Describes Strip-O-Matic Card Clothing. Benjamin Booth Co., Allegheny Ave. & Janney St., Philadelphia, Pa.

T-105 Versa-Matic Drawing Frame. Describes drafting elements, quality of sliver, roving and yarn possible. Saco-Lowell Shops, 60 Batterymarch St., Boston, Mass.

T-106 Sargent Opener. Describes opener with rotary evener and stripper. C. G. Sargent's Sons Corp., Graniteville, Mass.

T-107 Feathertouch Drafting. How to get "highest production per frame at lowest cost." Ideal Industries, Inc., Bessemer City, N. C.

T-108 Automatic Weighing Feeders. Tandem Weighing Feeder produces webs, mats and felts of continuing accuracy. James Hunter, Inc., 745 Loundes Hill Rd., Greenville, S. C.

T-109 Flexidyne Individual Card Drive. Describes operating principles, includes prices. Dodge Mfg. Corp., Mishawaka, Indiana.

T-110 Bobbins. Catalog describes metal, wood and plastic bobbins. Illustrations show actual use. Lestershire Spool Div., National Vulcanized Fibre Co., Wilmington, Del.

T-111 Magnetic Ideas. Booklet shows uses of permanent magnetic separation equipment in opening room as well as throughout mill. Removes tramp iron, prevents fires. Eriez Mfg. Co., Erie, Pa.

T-112 Advantages of Aldrich Pickers. Good technical text, comprehensive pictures. Aldrich Machine Works, P. O. Box 750, Atlanta, Ga.

T-113 New Condenser Tape. Describes Supr-O-Tape, an impregnated fabric condenser tape. Benjamin Booth Co., Allegheny Ave. & Janney St., Philadelphia 34, Pa.

T-119 Fiber Meter. Automatic weighing and blending assures quality, holds variation to 1%. James Hunter, Inc., Greenville, S. C.

T-120 Pin Drafters. Textile job report No. 21 tells how Warner & Swasey Pin Drafters help modify jute systems for carpet yarns. Warner & Swasey Co., 5701 Carnegie Ave., Cleveland 3, Ohio.

T-121 Universal Card Coiler. Literature describes both head and base swivel for adjustment. Includes data on 90-day free trial. McDonough Power Equipment, Inc., McDonough, Ga.

T-122 Recondition Opening & Cleaning. Bulletin gives whys and wherefores of reconditioning your opening and cleaning lines. Special attention given to each machine with suggestions as to parts replacement. Saco-Lowell Shops, 60 Batterymarch St., Boston 10, Mass.

T-123 Coiler Conversions. Full facts on low initial cost conversion to larger coiler cans. Lists advantages, has complete description. Southern States Equipment Corp., Hampton, Ga.

T-124 Card Drive. Bulletin 301-a describes simple, safe, efficient individual card drive. Southern States Equipment Corp., Hampton, Ga.

T-127 Pneumastop for Fly Frames. Brochure explains, in terms of dollars and cents, the benefits of having Pneumastop-equipped roving frames in the mill. Illustrated to show its operation and several different types of installations. Pneumafil Corp., Charlotte 8, N. C.

T-128 Quick-Set Roving Frame. Integral machine for processing of worsted, synthetic or blended yarns. Whitin Machine Works, Whitinsville, Mass.

T-132 Proctor Super Picker. Data sheet gives details of the Proctor Super Picker for use on slabs of baled cotton, or wool and synthetic blends in layers up to 12" thick. Proctor & Schwartz, Inc., 7th St. and Tabor Rd., Philadelphia 20, Pa.

T-133 Anti-Static Agent. Data sheet lists basic characteristics of liquid anti-static agent which eliminates processing difficulties with fibers due to static electricity. E. F. Houghton & Co., 303 West Lehigh Ave., Philadelphia 33, Pa.

yarn and warp making

T-201 Products For Spinning and Weaving. Complete line, applications, advantages shown. Dayton Rubber Co., Textile Div., Dayton, Ohio.

T-202 New Bobbin Manual. Complete bobbin guide. Lestershire Spool Division, National Vulcanized Fibre Co., Wilmington 99, Delaware.

T-203 Spindle Oil. "Gulfspin" insures against excessive wear and eliminates spindle wobble. Gulf Oil Corp., Gulf Bldg., Pittsburgh, Pa.

T-205 High Speed Automatic Quiller. Lists advantages and dimensions of "Autocopser." Terrell Machine Co., Inc., P. O. Box 928, Charlotte, N C.

T-206 Whirlwind Twister Winder. Booklet is job report on how "Whirlwind" Twister Winder reduces cost, increases production at New Bedford Cordage Company. Warner & Swasey Co., 5701 Carnegie Ave., Cleveland 3, Ohio.

T-208 Packaged Spinning Modernization. Details on Collecto-Vac, Open-Aire Creels, Cross-Jet Cleaner, Air Conditioning. Bahnson Company, Winston-Salem, N. C.

T-209 Sectional Warper. Describes full width and sectional warpers for knitting, weaving. Robert Reiner, Inc., Weehawken, New Jersey.

T-210 Conical Rings and Flyers. Complete details and specifications. Herr Manufacturing Co., Inc., 318 Franklin St., Buffalo 2, New York.

T-211 Precise Winding Machine. For winding pineapple or straight cones and tubes of synthetics. Foster Machine Co., Westfield, Mass.

T-212 Automatic Cleaning Equipment. Working details and advantages of the Tri-Rail Cleaner. American MonoRail Co., 13107 Athens Ave., Cleveland 7, Ohio.

T-216 Spinning Frame Conversions. Big-package, new-frame results at half the cost. Meadows Mfg. Co., Station A, Atlanta, Ga.

T-217 Collecto-Vac. New development collects lint, fly and broken ends. The Bahnson Company, Winston-Salem, N. C.

T-219 Spinning and Twister Rings. Complete details, pictures, price list. Whitinsville Spinning Ring Co., Whitinsville, Mass.

T-222 Suction Cleaning System. Details on new Collector Unit Model C-4. Pneumafil Corp., Charlotte 8, N. C.

T-223 Facts About Your Flyers and Spindles. Advantages of smooth flyer and spindle operation. Ideal Machine Shops, Bessemer City, N. C.

T-224 Traveling Cleaners. Describes improved frame and room cleaners. Parks-Cramer Co., Fitchburg, Mass.

T-225 Lapless Endless Spinner. Full information available. Ton-Tex Corporation, 31 Columbus Ave., Englewood, N. J.

T-226 Worsted Spinning. Describes five stages from top to yarn. Saco-Lowell Shops, 60 Batterymarch St., Boston 10, Mass.

T-227 Spindle Oiling Machine. Features and advantages noted. Wicaco Machine Corp., 4800 Stenton Ave., Wayne Junction, Philadelphia 44, Pa.

T-228 Handy Spinning Reference. Shows traveler speeds, sizes of ring flanges. Victor Ring Traveler Co., Providence, R. I. and Gastonia, N. C.

T-229 Unirail Uptwister. Higher yarn quality and better packages at faster speeds. Universal Winding Co., P. O. Box 1605, Providence, R. I.

T-230 Precision Textile Winding. Tensions and density control for winding rubber cones. Kidde Textile Machinery Corp., Farrand St., Bloomfield, N. J.

T-231 Cone Winder. Describes Model 102 winder, including applications. Foster Machine Co., Westfield, Mass.

(Continued on next page)

What You Should Know About STARCH *

NEW IMPROVEMENTS IN SLASHING

The basic function of the slasher room is to apply a film or coating of the proper sizing material to the warp yarn. The purpose of this size film or coating is to make the yarn as smooth as possible by binding fibers to the core of the yarn and also to provide a continuous smooth coating on the outside of the yarn. This "coating" increases tensile strength of the yarn and resists frictional abrasion and stress to which warps are subjected in the loom. The end results required from the slasher room are to assist in securing good weavability and greater loom efficiency.

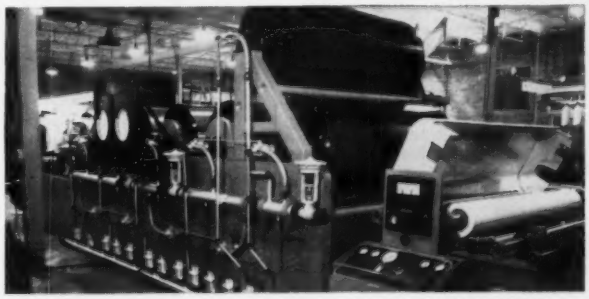
No matter how good the quality of the size itself, or the yarn, if it is not applied properly the end results will not be desirable.

In recent years new improvements have been developed which enable the textile mills to have complete control over the slashing operation. It is these new improvements, coupled with higher quality sizing ingredients, which have permitted large increases in slasher room and weave room production at a subsequent lowering in unit operating costs.

The development of Teflon with its ability to eliminate sticking of sized yarn to the guide rolls and the drying cans on multi-cylinder slashers has permitted tremendous increases in slasher production.

Although hot air slashers have been in use for several years, principally in the wool and worsted mills, certain advantages have expanded their use into cotton and synthetic mills. In the hot air slasher, the sized yarn is dried from all sides by a forced current of heated air. When the hot air slasher is stopped for doffing a warp or other reason, the heat is turned off so there is no danger from overdrying or overheating the yarn.

Rubber covered squeeze rolls with pneumatic loading and lifting are enabling slasher operators to produce more evenly and better sized warps than heretofore possible when using wool blankets or yarn wound rolls. For instance, if blankets or yarn rolls are used, the size pickup will vary depending upon the condition and age of the rolls. Therefore, it is always necessary to "break-in" or "cure" these rolls before using on the final squeeze roll. Even then the condition of the roll with use continues to vary affecting size pick-up. Whereas, with rubber covered rolls, the conditions from day to day remain constant. Also the operating cost of rubber rolls normally runs less than that of blanket or yarn rolls.



One of the major improvements and by far the most valuable in slasher operations is the development of the Griffin Size Applicator. This Applicator has several patented features. All are designed to provide maximum protection to the yarn sheet and size at all times, as well as applying size in a uniform, continuous film or coating at various operating speeds. The Applicator is equipped with a cover over the rolls and size vat which reduces hard size. This cover also aids in reducing roll marks or bars by maintaining a warm, moist atmosphere around the squeeze roll. Pneumatic squeeze roll pressures are automatically varied with slasher speeds (patented). Consequently, size pick-up is approximately the same at creep speed as at fast operating speeds. In conventional boxes the size pick-up is much less at creep speed than at high speed.

Recently, a new feature has been incorporated in the Griffin Applicator. This is the use of a positively driven rubber covered immersion roll which also acts as a dressing roll. The diameter of this roll is such that the dry yarn from the creel contacts the roll before entering the size. Therefore, maximum pull or stress on the yarn is while it is dry. Yarn strength is weakest when wet. Consequently, stretch is closely controlled and laps are virtually eliminated. The yarn sheet is held firmly in position throughout this Applicator, eliminating rolling, taping or crossing of ends at high speeds. There cannot be any shifting of selvage or outside ends. The size capacity is 20 gallons which is considered to be very desirable. Fresh size is continuously being pumped into the pan assuring a more uniform viscosity. When size has to be pumped between sets this brings about a substantial savings.

The HUBINGER COMPANY manufactures a full line of quality corn starches for the Textile Industry. Our Research and Development Laboratories and Textile Sales Staff keep fully informed and accumulate operating data on new developments in slasher room. We are confident that we can be of assistance in connection with solving your sizing problems. May we be of service?

* ONE OF A SERIES OF ARTICLES. FOR THE COMPLETE SET AND FOR OUR CONTINUING TECHNICAL DATA SERVICE, WRITE WITHOUT OBLIGATION TO:

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T-232 Short Cut To Staple Fiber Spinning. Ten steps in operation of the Tow Stapler. Turbo Machine Co., Lansdale, Pa.

T-233 Weaver's Knotter. Instructions as to use, description. A. B. Carter, Inc., Gastonia, N. C.

T-234 Textile Roll Coverings. Describes complete line as well as other mill supplies. Armstrong Cork Co., Industrial Div., Lancaster, Pa.

T-236 Tape For Driving Spindles. Describes banding for spindle drives on twisting, roving and spinning. Benjamin Booth Co., Allegheny Ave. & Janney St., Philadelphia 34, Pa.

T-239 Large Package Twister. Information on new anti-friction Jumbo Twister which carries a 14" bobbin with a 12" build. Meadows Mfg. Co., P. O. Box 4354, Atlanta, Ga.

T-241 Pacemaker Twisters. Folder gives details on high production, outlines notable features. Whitin Machine Works, Whitinsville, Mass.

T-242 Ring Spinning Frame. Folder presents description, illustrations and specifications of up-to-date Simplex ring spinning frames. Davis & Furber Machine Co., North Andover, Mass.

T-243 Anti-Friction Twister Bearings. Find out how bearings helped make The Meadows Twister almost friction-free. Fafnir Bearing Company, New Britain, Conn.

T-246 Better Beams. Information on three ways to make better beams. Kidde Textile Machinery Corp., Farrand St., Bloomfield, N. J.

T-249 Vari-Speed Motor Pulley. Describes variable speed control through use of simplified three-major-part disc-assemblies with only one lubrication point. Reeves Pulley Co., Reliance Electric & Engineering Co., Columbus, Ind.

T-250 Spinning Modernization. Booklet shows how lower costs and improved quality are obtained by spinning modernization. Roberts Company, Sanford, N. C.

T-252 Frankl Textile Machinery. Details on foreign worsted machinery, narrow fabric looms, and finishing machinery. Ernest L. Frankl Assoc., 515 Madison Ave., New York 22, N. Y.

T-255 New Bobbin Holder. Details on streamlined, positive latching bobbin holder. Whitehead Die Casting Co., 1140 Zonolite Rd., Atlanta, Ga.

T-258 Dependable Beams. Free bulletins available on complete line of light metal, continuous welded construction beams. Milton Machine Works, Inc., Milton, Pa.

slashing—weaving—tufting

T-301 Counting And Measuring Devices. Wide range of counting devices for all types of textile machinery. Veeder-Root, Inc., Hartford, Conn.

T-302 Loom Supplies. Describes complete line. E. H. Jacobs Northern Division, The Bullard Clark Co., Danielson, Conn.

T-304 Loom Production Charts. Celluloid card shows yards per loom per week. Ralph E. Loper Co., Greenville, S. C.

T-306 The Story Of Starches. History and information on manufacture and use of starches. National Starch & Chemical Corp., 750 Third Ave., New York 17, N. Y.

T-307 Loading System. Pneumatic loading system for Saco-Lowell slasher. The Foxboro Company, Foxboro, Mass.

T-308 Steel Warp Beams. Beams for both broadloom and narrow fabrics. Milton Machine Works, Inc., Milton, Pa.

T-309 Penford Gums In Textiles. Describes their excellent properties for warp sizing spun yarns. Penick & Ford Ltd., Inc., 420 Lexington Ave., New York 17, New York.

T-310 Saco-Lowell Positrol Slasher. Includes advantages, photographs, cut-away drawings. Saco - Lowell Shops, 60 Batterymarch St., Boston 10, Mass.

T-311 Rotary Unions. Cut costs, get better sealing on can dryers. Perfecting Service Company, 332 Atando Ave., Charlotte, N. C.

T-312 Air Slasher Dryer. Shows construction and operating details. Proctor & Schwartz, Inc., 7th St. and Tabor Rd., Philadelphia 20, Pa.

T-313 Butt-Tacking Sewing Machine. Describes operation, installation of single thread butt-tacking sewing machine. The Merrow Machine Co., 28 Laurel St., Hartford, Conn.

T-314 Loom Reed Booklet. Describes in detail a variety of reeds. Steel Heddle Mfg. Co., 2100 West Allegheny Ave., Philadelphia 32, Pa.

T-315 Cocker Equipment. Information on warp sizer, beam warper, creels, tensions, back-winders, etc. Cocker Machine & Foundry Co., Gastonia, N. C.

T-318 Formulas For Slashing Arnel. Includes also information on warping, weaving and quilling. Textile Sales Dept., Celanese Corp. of America, P. O. Box 1414, Charlotte 1, N. C.

T-319 Eclipse Starches For Textiles. Data sheet describes use of thin-boiling starches in the textile industry, with particular emphasis on warp sizing. Physical and chemical data included. A. E. Staley Mfg. Co., Decatur, Ill.

T-321 Cocker Slashers. Complete specifications and advantages, including allied equipment. Cocker Machine & Foundry Co., Gastonia, N. C.

T-322 Mounts For Looms. Vinyl mount eliminates need for bolts or paste. Clark, Cutler, McDermott Co., 106 W. Central St., Franklin, Mass.

T-323 Unifil Loom Winder. Describes new concept of filling preparation which needs no quilling area. Universal Winding Co., P. O. Box 1605, Providence, R. I.

T-324 Aligning Lays. Setting instructions for step-by-step aligning. Draper Corporation, Hopedale, Mass.

T-325 Traveling Loom Cleaner. Advantages of the new Oscillaire loom cleaner. Parks-Cramer Co., Fitchburg, Mass.

T-326 Draper Repair Parts Catalog. Contains illustrations covering all mechanisms and construction with complete listings. Draper Corporation, Hopedale, Mass.

T-327 Baling Presses. Describes complete line of motor-driven and hydraulic baling presses. Logemann Brothers Co., 3150 West Burleigh St., Milwaukee, Wis.

T-328 Textile Machinery Parts Catalog. Describes complete line of Dayco and Thorobred textile parts. Dayton Rubber Co., Dayton, Ohio.

T-329 Counting Devices. Describes complete line of counters for every application. Trumeter Company, 38 W. 32nd St., New York 1, New York.

T-331 Static Bars. Humorously illustrates how static can be overcome. The Simco Co., 920 Walnut St., Lansdale, Pa.

T-332 Care Of Draper Shuttles. Describes how longer, troublefree service may be obtained. Draper Corporation, Hopedale, Mass.

T-334 Largest Slasher Order in History. Folder tells why Springs Cotton Mills bought 25 multi-cylinder slashers. West Point Foundry & Machine Co., West Point, Ga.

T-336 One - Piece Sizing Agent. Houghto-Size CW provides low kettle cost, results in free-running warp of high breaking strength, increasing weaving efficiency. E. F. Houghton & Co., 303 West Lehigh Ave., Philadelphia 33, Pa.

T-339 Heliclone Loom Cleaner. Details on how it cuts costs, improves quality, reduces fire hazard. American Moistening Co., Cleveland, N. C.

T-342 Hydraulics in Slasher Drives. Describes characteristics of petroleum base and fire-resistant hydraulic fluids, how to select best fluid for a given job. Vickers, Inc., Box 302, Detroit 32, Michigan.

T-343 Laminated Carpet Covers. Complete information on Rol-Lap Carpet Covers with cemented seams. Bemis Bros. Bag Co., St. Louis 2, Missouri.

(Continued on next page)

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BOOKLETS

T-346 Facts On Non-Wovens. Fact file on non-wovens tells of new machinery, new methods of handling fibers, new bonding agents, etc. Curlator Corporation, Textile Div., E. Rochester, N. Y.

T-347 New Drying System. Describes high capacity, custom engineered drying equipment for tufted plants. Dalton Sheet Metal Co., Inc., Dalton, Ga.

T-351 Automatic Stop Motion. Complete information available on automatic stop motion for Titan warp tying-in machine. Edda International Corp., 468 Fourth Ave., New York 16, N. Y.

T-353 Backing for Tufteds How to get your tufting necessities with one telephone call. Fulton Cotton Mills, Atlanta, Ga.

T-355 Non-Woven Fabrics. Booklet gives outline of nature and history of non-woven and the manufacturing techniques of today. Booklet 56-219A, Chemical Div., Goodyear Tire & Rubber Co., Akron 16, Ohio.

T-358 Loom Supplies. Information on rod lubricant and applicator, sponge leather bunter, picker. Garland Mfg. Co., 54 Water St., Saco, Me.

T-360 Supplies For Tufters. Information on yarns for rug tufting or chenille or carpet backing. Piedmont Cotton Mills, East Point, Ga.

T-361 Eclipse Starches for Textiles. Data sheet describes use of thin-boiling starches in the textile industry, with particular emphasis on warp sizing. Physical and chemical data included. A. E. Staley Mfg. Co., Decatur, Ill.

T-362 Size That Satisfies. Information on getting the correct size package for your mill. Also on Bingham line of slasher rolls. Stodghill & Co., 716 Ponce de Leon Place, Atlanta, Georgia.

T-363 Rubber Covered Slasher Rolls. Handy booklet tells how to get longer life and better performance from rubber covered rolls. Includes data on handling, storing and grinding. Stowe-Woodward, Inc., Dept. C., 181 Oak St., Newton Upper Falls 64, Mass

knitting

T-401 Singlehead Full - Fashioned Machine. Literature on request from the Wildman-Jacquard Div., Draper Corp., Hopedale, Mass.

T-403 Raschel Knitter. Describes new Raschel-type knitting machine. Kidde Textile Machinery Corp., Inc., Farrand St., Bloomfield, N. J.

T-406 Needle Oil Does Not Stain. Details on "Gulftex 39" developed for knitting mills. Gulf Oil Corp., P. O. Box 1106, Pittsburgh 30, Pa.

T-407 Knitting Machines. Information on Wildman "TFS" 30" single section F-F machines and "AL" 32" diameter 32-feed "single purpose" circular interlock machine (rib type). Wildman-Jacquard Div., Draper Corp., Hopedale, Mass.

T-409 Knit Goods Finishing Machinery. Data on calenders, shrinkers, curers, extractors, steamers. Tubular Textile Machinery Corp., 33-61 54th St., Woodside, N. Y.

T-410 "Reading" Type 60 F-F Knitting Machine. Information about the new "Reading" Type 60, 38-section automatic full-fashioned hosiery knitting machine. Write Textile Machine Works, Reading, Pa.

wet processing

T-500 Cloth Guides. Bulletin 22.1 provides application diagrams and illustrations. GPE Controls, Inc., 240 E Ontario St., Chicago 11, Ill.

T-501 Tubes For Package Dyeing. Describes Dytex tubes for one-time use. Sonoco Products Co., Hartsville, S. C.

T-502 Finishing Machinery. Text and photographs of complete line of machinery. Marshall and Williams Corp., 46 Baker St., Providence, R. I.

T-503 Water Analysis. Includes tables, conversion factors, indicators, standard solutions. Solvay Process Div., Allied Chemical Corp., 61 Broadway, New York 6, N. Y.

T-504 Urea Formaldehyde. Literature on urea formaldehyde or U.F. concentrate-85. Dept. CUFI-29-1, Nitrogen Div., Allied Chemical Corp., 40 Rector St., New York 6, New York.

T-505 Acid Mordant Blue B. Details on Acid Alizarine Blue B for bright navy shades. Zinsser & Co., Inc., Hastings-on-Hudson 6, New New York.

T-506 Cationic Surface Active Agent. Describes Uversoft "D." Harshaw Chemical Co., 1945 East 97th St., Cleveland 6, Ohio.

T-507 Continuous Starch Cooker. Booklet shows how the use of continuous cookers for starch assures accurate control, economy, low maintenance in warp sizing and finishing. Clinton Corn Processing Company, Clinton, Iowa.

T-508 Peroxide Bleaching System. Illustrates and describes this continuous system. E. I. du Pont de Nemours & Co., Electrochemical Dept., Wilmington, Del

T-510 Textile Chemicals. Describes leading products for wet processors. Royce Chemical Co., Carlton Hill, N. J.

T-511 Brine For Textile Industry. Describes Lixate process for making brine. International Salt Co., Inc., Scranton, Pa.

T-512 Depuma. Describes odorless, viscous, non-evaporating emulsion for anti-foam. Koppers Co., Inc., Chemicals & Dyestuffs Div., 2010 Clarke Bldg., Pittsburgh 19, Pa.

T-513 Catalyst AC-6. Tells how curing efficiency may be stepped up as much as 25%. Monsanto Chemical Co., Plastic Division, Springfield 2, Mass.

T-514 Soda Ash Bulletin. Contains useful data covering this subject. Solvay Sales Division Allied Chemical Corp., 40 Rector St., New York 6, New York.

T-515 Kylan PC (Chitin). Brochure gives physical, chemical properties of Kylan PC, a commercially available chitin. Includes also reactions and methods of packaging. Moretex Chemical Products, Inc., Spartanburg, S. C.

T-516 Aluminum Chelate PEA-1. Technical data sheet tells how aluminum Chelta PEA-1 may be used with advantage in many applications where aluminum is proplate is unsatisfactory. Hershaw Chemical Co., 1945 East 97th St., Cleveland 6, Ohio.

T-517 Chemical Catalog. Lists products with chemical composition, properties and applications. Antara Chemicals Div., General Aniline & Film Corp., 435 Hudson St., New York 14, New York.

T-519 Hydraulic Power Units. Describes unit for operating hydraulic textile machines. B. F. Perkins & Son, Inc., Holyoke, Mass.

T-522 Cut Water Treatment Costs. Describes the control of scale, slime, algae and corrosion. Oakite Products, Inc., 126C Rector St., New York 6, New York.

T-526 Hycar Latices. Physical properties and typical fields of application. B. F. Goodrich Chemical Co., 3135 Euclid Ave., Cleveland 15, O.

T-527 Sodium Hydrosulfite. Literature and test samples are available on "T-C Hydro." Tennessee Corp., 617-629 Grant Bldg., Atlanta, Ga.

T-528 Ethanolamines. Lists application, chemical and physical properties. Nitrogen Division, Allied Chemical Corp., 40 Rector St., New York 6, New York.

T-531 Rotary Dyeing Machine. For use in dyeing hosiery, hats, gloves, socks, etc. Turbo Machine Co., Lansdale, Pa.

T-534 Dyeing and Finishing Machinery. Complete line presented in series of catalogs. Birch Brothers, Inc., 32 Kent St., Somerville 43, Mass.

T-535 Dyeing, Bleaching and Drying Equipment. Complete line for cotton, wool and synthetics described. Color pictures. Morton Machine Works, 1718 3rd Ave., Columbus, Ga.

T-536 Napthol Ratios Slide Chart. Quickly and accurately enables operators to determine Napthol Ratios. Alliance Color & Chemical Co., 33 Ave. P, Newark 5, New Jersey.

(Continued on next page)

BOOKLETS

T-537 "PCB" Rock Salt. Tells how product saves money, eliminates bad dyeing. Morton Salt Co, Industrial Division, 120 So. LaSalle St., Chicago 3, Ill.

T-540 Penford Finishing Gums. Complete data, including physical properties. Penick & Ford Ltd., Inc., 420 Lexington Ave., New York 17, New York.

T-541 Regeneration Of Zeolite Water Softeners. Explains advantages of Lixate Process. International Salt Co., Scranton, Pennsylvania.

T-542 Dyeing Synthetic Fibers. Detailed analysis of methods and materials. General Dyestuff Co., 435 Hudson St., New York 14, New York.

T-543 Industrial Brushes. Features use on shears, printing machines. M. W. Jenkins' Sons, Inc., 444 Pompton Ave., Cedar Grove, N. J.

T-544 Waste Heat Recovery Describes system of waste heat recovery from polluted water. Ludell Mfg. Company, 5200 West State Street, Milwaukee, Wis.

T-545 Washers For Scouring, Bleaching, Acidifying. Describes highcapacity, continuous process washers. C. G. Sargent's Sons Corp., Graniteville, Mass.

T-546 Naphthol for Lightfast Browns. Booklet describes new, straight, nonsubstantive naphthol, Naphthol AsBN, for the continuous naphtholation of cotton and rayon piece goods in the dyeing of economical, fast-to-light browns. General Dyestuff Co., 435 Hudson St., New York 14, New York.

T-547 Softener, Lubricant, Napping Aid. Technical information available on softener, lubricant and napping aid for natural and synthetic fibers, yarns and fabrics. Nopco Chemical Co., Harrison, N. J.

T-548 Handbook on Methocel. Gives technical information and use data on family of methylecellulose ethers called Methocel. Organic Chemicals Sales, The Dow Chemical Co., Midland, Mich.

T-549 Wall Charts For Handling, Testing H_2O_2 Two 16" x 21" wall charts available, one on handling and the other on testing H_2O_2. Becco Chemical Div., Food Machinery & Chemical Corp., Buffalo 7, N. Y.

T-550 Polyvinyl Acetate Emulsion. Bulletin contains a description of Celanese emulsions and cites advantages of Celanese polyvinyl acetate emulsions in textile finishing. Celanese Corp. of America, Plastics Div., 744 Broad St., Newark 2, N. J.

T-554 Instrument Catalog. Complete information on industrial instrument accessories and supplies. Includes specifications, parts numbers and prices. Catalog 500, Foxboro Co., Foxboro, Mass.

T-555 Drying Tumblers. Details on fast, efficient open-end tumblers. Huebsch Manufacturing Co., 3775 N. Holton St., Milwaukee 1, Wisconsin.

T-556 Hunter Dyeing Equipment. Describes fully with diagrams Hunter Model A Dye Becks, Hunter No/Lap Reels, Model S Dye Kettles, Open Width Dye Kettles, Sample Dye Kettles. James Hunter Machine Co., North Adams, Mass.

T-557 High Activity Catalyst. Technical bulletin describes new catalyst AC-6 which provides increased activity, excellent bath life, minimum odor formation, etc. Monsanto Chemical Co., Plastics Div., Springfield, Mass.

T-558 Cationic Dye Leveler. Bulletin TX-34 gives new information on dye leveler for acid colors on nylon tricot and wool through use of Nopco 1425-B. Nopco Chemical Co., Textile Chemicals Div., Harrison, N. J.

T-559 Flow Control Complete information on largest selection of values to handle flow control requirements. William Powell Co., 2525 Spring Grove Ave., Cincinnati 22, Ohio.

T-560 Profitable Curing. Complete story on profit-making loop curers and roller curers. Proctor & Schwartz, Inc., Seventh and Tabor Rd., Philadelphia 20, Pa.

T-561 Pump Pourable Pastes. Bulletin tells how Moyno pumps can pump any textile liquid that can be forced through a pipe, even if highly viscous or corrosive. Robbins & Myers, Inc., Springfield, Ohio.

T-563 Polyethylene Finishing Agent. Booklet contains information needed to adopt Emulsifiable A-C polyethylene as a finishing agent to any particular process. Semet-Solvay Petrochemical Div., Allied Chemical Corp., 5th Floor T, Rector Street, New York 6, N. Y.

T-564 Hydrogen Peroxide Bleaching. Booklet discusses advantages, operating details and savings in chemical costs of Activated Hydrogen Peroxide Bleaching Process for Cotton. Solvay Process Div., Allied Chemical Corp., 61 Broadway, New York 6, N. Y.

T-566 Ethylex Gums. Brochure describes properties of hydroxy ethyl ether derivatives of corn starch. Applications of these noncongealing gums in warp sizing and finishing covered. A. E. Staley Mfg. Co., Box 151, Decatur, Ill.

T-570 Carpet Dryers. Details, pictures, drawings on driven roll, conveyor, and tenter types. Andrews and Goodrich Div., 336 Adams St., Boston (Dorchester), Mass.

T-571 Chainless Mercerizing Machine. Two new bulletins provide complete information on the Benninger Chainless Mercerizing Machine for piece goods. H. W. Butterworth & Sons Co., Bethayres, Pa.

T-572 Dyeing Machinery for Every Purpose Illustrated literature available on complete line of automatically controlled machinery. Gaston County Dyeing Machine Co., Stanley, N. C.

T-573 Textile Finishing Machinery. Folder available from Marshall and Williams Corp. contains photographs of each piece of finishing equipment manufactured by the firm. Request from Marshall and William Corp., 46 Baker St., Providence, R. I.

T-575 Rotary Unions and Traps. Complete details on various types of rotary unions and steam traps, including specifications, operating pressures, etc. Perfecting Service Co., 332 Atando Ave., Charlotte, N. C.

T-576 Yarn Preparation. Describes products for yarn preparation, printing, finishing. Polymer Industries, Springdale, Conn.

T-577 Stainless Dry Cans. Information on stainless steel, 75 psi, reverse dished, head dry cans. Can be furnished Teflon-coated if desired. Sims Metal Works, West Point, Ga.

T-579 Automatic Guiding Equipment. Catalog shows various types of automatic guiding equipment for accurate cloth guiding. Fife Mfg. Co., Inc., P. O. Box 9815, Oklahoma City, Okla.

fibers and yarns

T-601 Fortisan-36, New Textile Fiber. Includes charts, diagrams, text, presents technical properties. Textile Sales Dept., Celanese Corp. of America, P. O. Box 1414, Charlotte, N. C.

T-602 Caprolan Nylon Heavy Yarns. Describes strength, long flex life and ready dyeability. Fiber Sales Dept., National Aniline Div., 261 Madison Ave., New York 16, N. Y.

T-603 Rayon—Mile By Mile. Details on how rayon is produced mile by mile, perfect inch by inch. Industrial Rayon Corp., 500 Fifth Avenue, New York 18, N. Y.

T-604 The Chemstrand Nylon Story. Describes the birth and growth of Chemstrand Nylon. Chemstrand Corp., 350 Fifth Ave., New York 1, N. Y.

T-605 Color-Fast Fibers. Further information on "Coloray," Courtauld's solution dyed rayon staple which is a contribution to colorfastness in fabrics. Courtaulds (Alabama) Inc., 600 Fifth Ave., New York 20, N. Y.

T-606 "Dial-A-Fiber." Ingenious circular chart indicates properties and compatabilities of "Uvitex" for application on natural and synthetic fibers. Ciba Co., Inc., Route 208, Fair Lawn, New Jersey.

(Continued on next page)

BOOKLETS

T-807 The Story On Lurex. Information on metallic yarns made with Mylar and how they are developed to broaden the scope of the tufted industry. Textile Fibers Dept., The Dow Chemical Co., James River Div., Williamsburg, Va.

T-808 Taslan Textured Yarns. Technical information on dyeing and finishing of new fabrics made with Taslan. E. I. du Pont de Nemours & Co., Wilmington 98, Delaware.

T-809 Processing Nylon Staple. Data sheet describes method of processing Du Pont 420 Nylon Staple in blends with cotton. Covers complete operation through sizing. Bulletin N-93, E. I. du Pont de Nemours & Co., Inc., Wilmington, Del.

T-811 Candlewick Tufting Yarns. In cotton, rayon, nylon and blends . . . a "put up" for every need. Candlewick Yarn Co., Dalton, Ga.

laboratory

T-701 Testing Instruments. Descriptions of 37 instruments for testing textiles. Custom Scientific Instruments, Inc., 541 Devon St., Kearny, N. J.

T-702—Metal Detector. Spot troublesome metal before it harms equipment or fabrics. Radio Corp. of America, Dept. S-271, Building 15-1, Camden, N. J.

T-703 Shadograph Weighing Devices. Pictures and information on various types of scales. Exact Weight Scale Co., Columbus 8, Ohio.

T-704 Pilling Tester. Booklet contains technical information on random tumble pilling tester. Includes features, advantages, recommended uses and gives detailed reports on preparing various materials for testing. E. I. DuPont, De Nemours & Company, Textile Fibers Dept., Wilmington, Delaware.

T-705 Strobotac. Measures speed of rotating, reciprocating or other cyclic motions. General Radio Co., 275 Massachusetts Ave., Cambridge 39, Mass.

T-706 Yarn Count Scale. Data sheet tells how direct-reading instrument provides fast, accurate method of determining yarn number. Exact Weight Scale Co., Columbus 8, Ohio.

T-712 Automatic Moisture Control. Booklet tells how Hunter Electro-Psychrometers are used in measuring percentage of moisture in all classes of textiles, whether yarns or fabrics. Hunter Controls, Inc., Div., James Hunter Machine Co., North Adams, Mass.

services for management

T-801 Factoring Service. Details on advantages of factoring, including information on general banking and pension plans. Trust Company of Georgia, Atlanta, Ga.

T-802—Non-Woven Fabrics. Report includes how non-woven fabrics are made, machinery involved, sample fabrics. Textile Fibers Dept., E. I. du Pont re Nemours & Co., Inc., Wilmington 98, Del.

T-805 Profit Through Factoring. Brochure gives facts on the use of factoring as a modern plan for developing sound business growth and added profits. Walter E. Heller & Co., Dept. TI-2, 105 W. Adams St., Chicago 99, Ill.

T-807 Group Insurance. Information on how textile group insurance can insure the happiness of your employees and make for a better running mill. Provident Life and Accident Insurance Co., Group Dept., Chattanooga, Tenn.

T-808 Factoring. Complete details on services offered as mill factors. L. F. Dommerich, 271 Madison Ave., New York, N. Y.

T-809 Move Key Men Quickly. Industrial airplanes help keep your key men from being stuck on one job at a time. Southern Airways Co., P. O. Box 718, Atlanta, Ga.

T-810 The Wonalancet Way is the title of an editorial booklet published five times a year dealing with current problems. Write Wonalancet Company, 128 Burke St., Nashua, N. H.

T-812 Beechcrafts at Work. Booklet available from Southern Airways Company shows how Beechcraft executive airplanes can save executives time ond money. Write Southern Airways Co., P. O. Box 718, Atlanta, Ga.

T-818 Textile Engineering. Information on complete, integrated service covering every type of textile project. Robert & Co. Assoc., 96 Poplar St., N. W., Atlanta 3, Ga.

T-819 Organized Lubrication Pays. Planning book entitled "Management Practices that Control Costs via Organized Lubrication" shows how to effect savings in five areas of plant operation. Available from Texaco, Inc., 135 E. 42nd St., New York 17, N. Y.

T-821 Inventory Control. How a daily report of inventory condition mechanically produced on existing business machines showed a net direct payroll saving of more than $10,000 a year. Administrative Methods Dept., Werner Textile Consultants, 1430 Broadway, New York, N. Y.

plant operation

T-902 Belt Lacing Equipment. Includes prices, specifications, etc. Clipper Belt Lacer Co., Grand Rapids, Michigan.

T-903 "Motor Selector." How to select a-c motors for specific application. Bulletin B-2103. Reliance Electric & Engineering Co., 24701 Euclid Ave., Cleveland 17, Ohio.

T-904 Gearmotors, Motogears, and Fluid Drives. Catalog supplies complete information on double, triple, and quadruple reduction gearmotors and motogears. Electrofluid and fluid drives are also explained. Link-Belt Company, Dept. PR, Prudential Plaza, Chicago 1, Illinois.

T-905 Rotary Pressure Joints. Details on self-lubricating, self-adjusting, self-aligning joints. The Johnson Corp., Three Rivers, Mich.

T-907 Wrap Up Lint Problems. Automatic lint filter removes lint from air, winds it into disposable roll. Bulletin 234, American Air Filter Co., 275 Central Ave., Louisville 8, Ky.

T-908 Textile Motors. Bulletin describes complete line of textile motors. Diehl Mfg. Co., Finderne Plant, Somerville, N. J.

T-909 Compressors. WB two-stage water-cooled. Space-saving units require modest foundation up to 125 psi and 1150 cfm displacement. Bulletin WB-10. Gardner-Denver Company, Quincy, Illinois.

T-910 Modern Lubrication Methods. A report to management tells how modern lubrication methods can help save thousands of dollars in three major economic areas of textile plant management. Describes twelve operating advantages of automatic lubrication systems. Lincoln Engineering Co., 4010 Goodfellow Blvd., St Louis 20, Mo.

T-911 Leather Belting. Selection, installation, proper maintenance. Atlanta Belting Co., 508-510 Whitehall St., S. W., Atlanta, Ga.

T-912 Story of Nylon Bristle. Tells of discovery and production, with special attention to "Tynex," a form of nylon ideal for use in brushes. M. W. Jenkins' Sons, Inc., 444 Pompton Ave., Cedar Grove, N. J.

T-913 "One-Shot" Lubricators. Bulletin describes wide field of application for one-shot lubricators on machines requiring closely controlled but infrequent oil feed. Bijur Lubricating Corporation, Rochelle Park, N. J.

T-914 Industrial Greases. Describes multi-purpose lithium soap industrial greases. Sinclair Refining Co., 600 Fifth Ave., New York, New York.

T-917 Blowers And Exhausters. Full description, including detailed drawings. Buffalo Forge Co., 490 Broadway, Buffalo 5, N. Y.

T-918 Paint Stripping Booklet. Explains simplified method of stripping paint. Oakite Products, Inc., 22 Thames St., New York 6, New York.

(Continued on next page)

BOOKLETS

T-921 Catalog Of Needle Bearings. Design, application for five types of needle bearings. The Torrington Co., Torrington, Conn.

T-924 Ball Bearings For Textile Machinery. Bearings for all phases of textile processing. The Fafnir Bearing Co., New Britain, Conn.

T-925 Lubrication Of Bearings. Helpful list of do's and don't to prolong bearing life. New York & New Jersey Lubricant Co., 292 Madison Ave., New York 17, New York.

T-928 Controls For Heating, Air-Conditioning. Catalog describes and illustrates line of automatic controls for heating, ventilating and air-conditioning control systems. Barber-Colman Co., Rockford, Ill.

T-929 New Air Conditioners. Bulletin describes new line of AAF-Herman Nelson Air Conditioning Units, featuring the Roll-O-Vent automatic air filter. American Air Filter Co., Inc., Louisville 8, Ky.

T-930 Dry Fluid Drive. Booklet describes how Flexidyne offers a new approach to difficult drive problems through the use of steel shot as a "liquid." Dodge Mfg. Corp., 1000 Union St., Mishawaka, Ind.

T-931 New V-Belt Drives. Bulletin contains information on selection and operation of V-belt drives. Covers all types of V-belt drives. Dodge Mfg. Corp., Mishawaka, Ind.

T-932 Smooth Acceleration, Deceleration. Describes eddy - current equipment for smooth, stepless acceleration and deceleration. Eaton Mfg. Co., 3307 14th Ave., Kenosha, Wis.

T-933 Catechism Of Electric Machinery. Booklet contains complete technical treatise on various electrical machines. Electrical terms defined. Fairbanks, Morse & Co., Fairbanks-Morse Bldg., Chicago 5, Illinois.

T-937 V-belts. Tells how raw materials and finished belts are tested and inspected. Quality control and experimental production covered. Booklet 5-51107, Dept. 794, Goodyear Tire & Rubber Co., Akron 16, Ohio.

T-939 Lubricant Pumps. Catalog features new line of air-motor operated lubricant pumps. Covers design and engineering features, lubricant-output-performance and selection charts. Catalog No. 65, Lincoln Engineering Co., 5702-15 Natural Bridge Ave., St. Louis 20, Missouri.

T-942 Central Station Air Conditioning. Booklet describes controlled ventilation, air circulation, air washing, humidifying, evaporative cooling which are available through central station air conditioning. Parks-Cramer Co., Fitchburg, Mass.

T-948 New Lubricated Plug Valves. Semi-steel and steel lubricated plug line. The William Powell Co., 2525 Spring Grove Ave., Cincinnati 22, Ohio.

T-949 Casters and Wheels. Manual contains descriptive material and application data for various casters and wheels. Darnell Corp., Limited, 1200 Woodruff Avenue, Downey, Calif.

T-950 Air Conditioning Control. Air conditioning control cabinets are described, with tables, curves, and sketches, dimensions, physical data, performance, and coil ratings, etc. Buffalo Forge Company, 490 Broadway, Buffalo, N. Y.

T-951 Organized Plant Lubrication. This subject, including how to go about it, is discussed at length in the July, 1958, issue of "Lubrication," a Texaco publication. Reprints of that issue are available from Texaco, Inc., 135 E. 42nd St., New York 17, N. Y.

T-952 Speed Reducer. Folder describes "Universal Worm Gear Speed Reducer" which is built to operate in three positions and has a higher capacity with external fins for cooling. Link-Belt Company, Prulential Plaza, Chicago 1, Ill.

T-953 Enduro Stainless Steel. Brochure describes various types of Enduro Stainless Steel, including properties, fabricating, joining, and care and finishing. Republic Steel Corporation, Republic Building, Cleveland 1, Ohio.

T-954 Motor Selection. Bulletin gives concise data on selection to users of A-C motors from one through 200 hp. Pictures, ratings, dimensions, etc, included. Reliance Electric and Engineering Co. 24701 Euclid Ave., Cleveland 17, Ohio.

T-956 Penetrating Wood Finish. Describes floor seals for textiles. E. I. du Pont de Nemours & Co., Inc., Finishes Div., Wilmington, Del.

T-957 Pipe Threading Tools. Capacities and weights included along with pictures. Ridge Tool Co., Elyria, Ohio.

T-958 Stainless Steel Fabrication. Information on ventilating and drying, slasher exhaust, and materials handling in stainless. Sims Metal Works, West Point, Ga.

T-960 Waste Treatment. Booklet describes "Dowpac" application in waste treatment. Contains properties, assembly, application in oxidation towers and performance data. Dow Chemical Co., Midland, Mich.

T-962 Industrial Floor Finishes. 16-page book contains specifications and descriptions of industrial floor finishes for textile use. Includes directions for application. Minnesota Paints, Inc., 1101 Third Street, South, Minneapolis, Minn.

T-963 Humidification by Graduvac. Bulletin gives details on gravity type atomizer control system and tells how supply of water to atomizers is automatically regulated. Parks-Cramer Co., Fitchburg, Mass.

T-967 Tailor-Made Gears. Information on textile and industrial gears for every purpose from iron, steel, bronze, rawhide, Bakelite, and made to specification. Ferguson Gear Co., Gastonia, N. C.

T-969 Multifak Lubrication. How you can simplify lubrication in your mill by using Multifak, the low cost multiple purpose textile lubricant. Texaco, Inc., 135 E. 42nd St., New York 17, N. Y.

T-970 Johnson Rotary Pressure Joints. Bulletin describing the rotary pressure joint which requires no packing, no lubrication, and no adjustment. Gives installation and maintenance instructions, types, sizes, dimensions, and prices. Request from The Johnson Corp., Three Rivers, Michigan.

materials handling and shipping

T-1005 Tramrail Engineering And Application. Data on how Tramrail equipment can cut handling costs. Cleveland Tramrail Div., Cleveland Crane and Engineering Co., 1036 East 289th St., Wickliffe, Ohio.

T-1007 Materials Handling For Textiles. Shows how fibre trucks can increase efficiency, protect products. National Vulcanized Fibre Co., Wilmington 99, Del.

T-1008 Stresses on Overhead Tracks. Covers track peening, discusses stresses. Cleveland Tramrail Div., Cleveland Crane & Engineering Co., Wickliffe, Ohio.

T-1012 Improved Materials Handling. "Materials in Motion" describes use of fibre containers. National Vulcanized Fibre Co., Wilmington, Del.

T-1013 Trucks Doff, Store, Become Spooler Tray. Brochure tells how mobile boxes are being used as doff boxes, storage boxes, and spooler trays on Barber-Colman spooler. Fisher Mfg. Co., Hartwell, Ga.

T-1014 Carpet Cores, Storage Tubes. Literature on simplified storage and better cores for rugs. Sonoco Products Co., Hartsville, S. C.

T-1015 Overhead Conveyor. Catalog features "Cable-Way" Overhead Conveyor which has low-cost, ease of installation, quiet operation and long life. Conveyor Division, The American MonoRail Co., Fourth and Franklin Sts., Tipp City, Ohio.

T-1016 Guide To Better Closures. For use as a guide for the evaluation of methods currently in use to effect economy and better production in the closure of fiber board boxes. Acme Steel Products Div., Acme Steel Co., 135th and Perry Ave., Chicago, Ill.

T-1020 Automatic Wrapping. Tells how automatic packaging increases the sales appeal of textile products. Saves labor and materials and adds tamper - proof product protection. Write Hayssen Mfg. Co., Sheboygan, Wis.

SHORTS & REMNANTS

(from page 48)

Hair Raising Promotion.

No, the gentleman pictured below is not Fidel Castro, nor is he Trade

or Mark Smith. It's none other than genial **Bill Irby,** editor of the *Avondale Sun,* the lively paper published by Avondale Mills.

What's he doing with all that foliage? Well, let **Bill** tell you in his own words, as printed on a card he hands out to the inquisitive:

TO ANSWER YOUR QUESTIONS

I'm growing this for the Sylacauga 125 Years of Progress Celebration May 10-16, 1959.

YES, it itches.
NO, my wife doesn't like it.
YES, you can feel it.
NO, you can't pull it.
YES, it scares the kids.
NO, the girls won't date me.
YES, it will be heck to get off.
YES, I'm having a whale of a lot of fun too.

If this doesn't answer your questions, grow one, Baldface, and find out FOR YOURSELF.

Miscellaneous Wants

Further data on American Moistening Co. ad, Mar. 1959—**Robert E. Cline,** gen. mgr., Southern Elastic Corp., Hickory, N. C.

More on Terrell Machine Co.'s ad, April 1959—**C. A. Kennedy,** General Asbestos & Rubber Co., N. Charleston, S. C.

Textbook on plain Raschel knitting and pattern layout—**A. Gingert,** Gingert Laces, Inc., Paterson, N. J.

Who makes Macomber Add-A-Harness Loom—**A. W. Bowden, Jr.,** Peter Karen Mfg. Co., Inc., Pawtucket, R. I.

Further data on Roberts Co. ad, Feb. 1959—**C. E. Kirk,** mfg. mgr., Ludlow Mfg. & Sales Co., Indianola, Miss.

Information on terry cloth production—**Major Ralph H. Cope,** Fort Bliss, Texas.

More on Abbott quillers—**Bill H. Hood,** Callaway Mills Co., Manchester, Ga.

More details on English process for continuous bleaching of knitwear, and Velcro fastener (as described in "Textile Research Achievements in 1958," TI for Mar. 1959)—**E. Archer,** Organisation Collinet, Paris, France.

Further information on Trumeter measuring equipment—**Malvin Richter,** partner, Richland Knitting Mills, Philadelphia, Pa.; **P. Rubin,** Knit Goods Brushing & Finishing Co., Brooklyn, N. Y.

Who makes machines for producing stretch nylon yarns?—**H. S. Chan,** managing partner, Tung Lai & Co., Hong Kong.

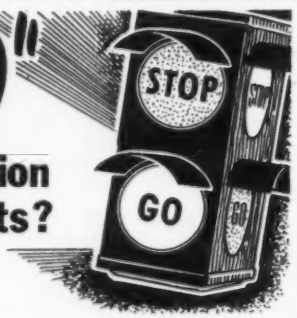
Further data on Singer invisible seamer—**L. B. Ramsey,** pres., Belding Corticelli Ltd., Montreal, P. Q.; **William G. Kippel,** mgr., Victoria Hosiery Mills Ltd., St. Johns, P. Q.

Annie and the Governor

Here we have North Carolina's Governor **Luther H. Hodges** inspecting TV star Annie Oakley's famous six-shooter. They met in Winston-Salem during Northwest North Carolina Day Tour for a group of 200 top executives of the nation's leading

businesses. Annie, who is really actress Gail Davis, appeared as a guest star at Tommy Steiner's World Championship Rodeo, sponsored by P. H. Hanes Knitting Co. and Blue Bell, Inc., for the benefit of the Boy Scouts.

IS "STOP and GO" Production Robbing You of Profits?



"Stop-and-go" production of cloth is costly . . . and unnecessary when the stoppages are due to the fabric guiders. No two fabrics can be handled exactly alike. But you can eliminate a lot of time and expense by installing

MECHO AIR GUIDERS

With Mecho on the job, you can quickly adjust for the lightest fabric or #8 duck *while in operation.* Once set, it will maintain constant cloth alignment and guide within 1/8 inch. It can't spatter or turn a double edge . . . and there are no weights or levers to fuss with. No repair problems, either.

Write today for the helpful FREE Mecho Air Guider Catalog.

THE Guider SPECIALTY COMPANY

431 W. ROCK AVENUE — NEW HAVEN 15, CONN.

Southern Representatives:
McSpadden and Scantland, P. O. Box 3635, Charlotte 3, N. C.

PERSONAL NOTES

Three veteran supervisors have retired at American Thread Co.'s Willimantic, Conn., mills. They are: **Carleton King,** assistant superintendent of finishing; **John Evans,** overseer of shipping; and **Walter Taylor,** overseer of cone and tube winding. **William McBee** has been appointed assistant superintendent of finishing and **Raymond Lis** has become overseer of cone and tube winding. * * * **Thomas E. Lyons, Jr.,** has assumed his new duties as assistant purchasing agent, southern plants, at the Sevier, N. C., office, headquarters for southern purchasing. **Joe F. Mattison** has been named assistant to the manager of the Sevier plant, having been transferred from the company's Clover, S. C., mills where he performed special assignments in statistical quality control projects.

Belding Hemingway Co., Inc., New York City, has elected **Harold A. Johnston** chairman of the board. He succeeds **Paolino Gerli** who resigned as chairman, but remains a board member and a member of the executive committee.

Bigelow-Sanford Carpet Co., Inc., has elected two new corporate vice-presidents. They are **Patrick A. DeBiase,** vice-president for marketing, and **C. Chester Bassett,** vice-president for Hartford Rayon. Both were previously divisional vice-presidents.

Paul Rohr has joined the supervisory staff in the finishing of cashmere, vicuna, and camelhair fabrics at Botany Finishing Co.'s Passaic, N. J., plant. He was formerly head finisher at Forstmann Woolen Co.

Arthur E. Weiner has been named an assistant vice-president of Burlington Industries, Inc., and transferred from the New York City offices to Greensboro, N. C. In his new capacity, Mr. Weiner will serve as executive assistant to the board chairman and president and to the vice-chairman of the board with responsibilities in both staff and manufacturing areas of the southern operations. * * * **James S. Love, Jr.,** has been appointed president of Sidney Blumenthal & Co., a member company of the Burlington organization. **Max Hesse** succeeds Mr. Love as president of Burlington Ribbon Mills. Both men are headquartered in New York City. * * * **Robert C. Reinhardt, Jr.,** has been elected vice-president of manufacturing of the newly-integrated Catlin Farish Co. division of Burlington. He headquarters in Batesburg, S. C. **Marion Kirby** has joined the division as superintendent of manufacturing, the position formerly held by Mr. Reinhardt. * * * **John C. Tate, Jr.,** has been transferred to Greenville, S. C., as executive assistant to the president of B. I. Cotton mills division. **W. Gaines Huguley,** president of the F. W. Poe Manufacturing Co., a Burlington member company, has been made a vice-president of the division. **M. M. Taylor** has become plant manager at Poe. **Walter Hildebrandt,** vice-president of sales and merchandising, has assumed additional responsibilities in the manufacturing area for plants in Sherman and Post, Texas. He will maintain offices in divisional headquarters in Greenville. * * * **James D. Barbee** has assumed his new responsibilities as president of Cramerton (N. C.) Mills. **J. Roderick Meikle** has been appointed a vice-president.

Callaway Mills Co., LaGrange, Ga., has named **Joe Thomas Short** head of mechanical research, research and development division, replacing **Sam P. Parker** who retired recently after 20 years with the company. * * * **Frederick F. Hand** has assumed his duties as sales engineer at the nonwoven Callon plant in LaGrange. * * * At the Hillside plant **Garland Sligh** has been promoted to overseer wool carding and spinning. **John Tice** has succeeded Mr. Sligh as plant engineer. **Edward "Randy" Gasque** has assumed his duties as overseer, cut order department, and **Clyde B. Hinton** has become assistant overseer wool carding and spinning.

Georgia Institute of Technology, Atlanta, Ga., has appointed **Dr. James L. Taylor** director of the A. French Textile School. Dr. Taylor has been serving as acting director for the past year. * * * **Lawrence V. Johnson** has been named director of the Engineering Extension Division of Georgia Tech. For the past ten years, Mr. Johnson has served as director of the Southern Technical Institute, a branch of the Engineering Extension Division. **Hoyt L. McClure** has succeeded Mr. Johnson in the latter position.

Edwin Wilkinson, newly-elected president of the National Association of Wool Manufacturers, was the recipient of a surprise "Golden Fleece" award during the recent NAWM meeting. The award was given in recognition of his untiring efforts on behalf of the industry. At the same meeting, **Clarence M. Bishop,** president of Pendleton (Ore.) Woolen Mills, was presented with a silver

Mr. Hand
Callaway

Mr. Tice
Callaway

Mr. Sligh
Callaway

Mr. Hinton
Callaway

Mr. Gasque
Callaway

Dr. Taylor
Ga. Tech

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DOUBLE
PROTECTION
against FIRES and
MACHINERY DAMAGE!

ERIEZ
HI-POWR
permanent non-electric
MAGNETIC HUMPS*

Two powerful magnets in *one* highly efficient enclosed unit! For removal of tramp iron from pneumatic lines; offers maximum protection against metal damage to expensive equipment such as metallic clothing on garnett cylinders. Highly effective against tramp-iron-caused fires in opening rooms, etc. Increases production, reduces downtime. **U.S. Pat. No. 2,612,268.*

COMPLETELY NON-ELECTRIC, SELF-CONTAINED • NO OPERATING OR MAINTENANCE COSTS • FULLY ENCLOSED UNIT • QUICKLY AND EASILY INSTALLED IN VERTICAL OR HORIZONTAL POSITION • MAGNETIC STRENGTH GUARANTEED INDEFINITELY • PAYS FOR ITSELF MANY TIMES OVER BY PREVENTING FIRES AND MACHINERY DAMAGE.

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Eriez Mfg. Co., 72U Magnet Dr., Erie, Pa.

ERIEZ

PERSONAL NOTES

(from page 183)

medallion as a token of the esteem in which the group holds him as a result of his "inspiring success" and his "contributions to the entire wool textile industry."

Board members at Bates Manufacturing Co., Lewiston, Me., have elected **Albert T. Armitage** chairman, succeeding the late Lester Martin. At the same time, **Robert Allen Martin** was chosen to fill his father's seat on the board. **Mrs. Lester Martin** was chosen to succeed her late husband as chairman of Windsor Industries, Inc., which has a controlling stock interest in Bates.

Clemson (S. C.) College has named **Thomas D. Efland** head of the textile research department. Prof. Efland succeeds **Dr. William T. Rainey** who recently accepted an appointment at the Oak Ridge (Tenn.) Laboratories. * * * **E. A. LaRoche,** associate professor of textiles and industrial management, has been awarded a National Science Foundation fellowship to the Southern Regional Graduate Summer Session in Statistics at North Carolina State College in Raleigh, N. C.

An engraved gold watch was presented to **Edward R. Gerringer, Sr.,** to mark completion of 50 years employment with Cone Mills Corp. The presentation was made at the 25-Year Service Award Banquet. Mr. Gerringer is overseer of the cloth room at the Minneola Plant in Gibsonville, N. C. * * * At Cone's annual stockholders' meeting, three executives were added to the board of directors. They are: **Lewis S. Morris,** secretary and assistant treasurer, who was also named a vice-president at the meeting; **John E. Field,** assistant secretary of the corporation and secretary-treasurer of Cone Mills, Inc.; and **Percy C. Gregory, Jr.,** vice-president of the corporation and executive vice-president of the finishing division. New officers named in addition to Mr. Morris were: **Byron Calhoun,** assistant secretary; **James Perrin,** assistant treasurer; and **Alan Cone,** assistant treasurer. * * * **Robert R. Scruggs** has been named personnel manager of Cone's Granite Plant, Haw River, N. C., and Proximity Print Works, Greensboro, N. C. **Cecil Horne** was made assistant personnel manager at Granite and **Leo Redmond** was chosen assistant personnel manager at Proximity. * * * **Everette Poore** has accepted a position as purchasing agent for Proximity and Granite. Mr. Poore was formerly connected with Burlington Industries, Inc., in a similar capacity.

Smith Crow has retired as vice-president of Erlanger Mills, Lexington, N. C.

Stanley H. Chambers, Montreal (Can.) Cottons, Ltd., was elected president of the Canadian Association of Textile Colourists & Chemists, Quebec Section, at the organization's recent annual meeting. Elected vice-presidents were: **J. Dean,** Canadian Celanese, Ltd., Drummondville, Que., and **J. G. Soroka,** Fabric Dyers, Ltd., Lachine, Que. **Carl A. Reiser,** retired, was chosen honorary president.

Champlain Silk Spinners Corp., Whitehall, N. Y., has chosen **George O. Belanger** to succeed his father, the late Theodore Belanger, as president and a director of the firm.

Claussner Hosiery Co., Inc., Paducah, Ky., has elected **James R. Smith** to the newly-created post of chairman of the board and chief executive officer. **William F. Paxton** succeeds Mr. Smith as company

Officers of the National Association of Hosiery Manufacturers, Inc., elected at the recent Atlantic City, N. J., meeting are: (l to r) W. F. WILLIAMSON, president; WILLIS H. SLANE, JR., of Slane Hosiery Mills, first vice-chairman; REUBEN C. BALL, vice-president and secretary; RAYMOND R. RICE, Virginia Maid Hosiery Mills, board chairman; CURT SEIFART, Hudson Hosiery Co., treasurer; CHARLES W. McCRARY, McCrary Hosiery Mills, second vice-chairman; and MATTHEW C. KURTZ, assistant secretary.

president and **Gus T. Smith** was named executive vice-president.

Leonard Smith has been elected to honorary membership in Delta Kappa Phi national textile fraternity. Dr. Smith is director of utilization research, National Cotton Council, in Washington, D. C.

The North Carolina State College chapter of Phi Psi, national textile fraternity, recently presented its "Man of the Year" award for distinguished service to the textile industry to **William G. Alligood,** personnel director of American & Efird Mills, Inc., Mount Holly, N. C.

Philadelphia (Pa.) Textile Institute has awarded **Carlos J. Echavarria** an honorary Doctorate of Laws in recognition of his leadership in the Latin American textile industry and as a token of appreciation for "the accomplishment and friendship of our Latin American neighbors." Mr. Echavarria is president of Cia. Colombiana de Tejidos, S. A. **William W. Tomlinson,** vice-president of Temple University, was also conferred with the honorary degree, Doctor of Laws. In addition, **Henry E. Millson,** manager of the technical service laboratories of American Cyanamid Co., Bound Brook, N. J., was the recipient of the honorary degree, Doctor of Textile Science.

The following organizational changes have been announced by Riegel Textile Corp.: **W. M. McFeely** has been appointed vice-president-organization for both Riegel Textile Corp. and Riegel Paper Corp.; **P. V. Kolonia** has been named supervisor-placement for both corporations; **J. T. Allmon** is now supervisor-management development with headquarters in New York City; and **B. P. Robinson** is the newly-named director of industrial relations for Riegel Textile Corp. with headquarters in the southern executive office.

The Rhode Island Textile Association honored **Edward F. Walker** at its 40th anniversary dinner with the gift of a watch in recognition of his many years of work in the organization. Mr. Walker, who founded the association in 1919, retired the first of the year as secretary-treasurer. He was succeeded by **Stanley B. Thomas.**

At the annual meeting of the Southern Textile Overseers Association in Columbia, S. C., **Lyman Frost** of Belton, S. C., was elected president. Other officers are: **Charles Grubb** of Conestee, S. C., vice-president; **Joseph Bowring** of Macon, Ga., secretary; and **James Benson** of Spartanburg, S. C., treasurer.

Starr (S. C.) Mills Corp. has appointed **C. W. Sartain** cloth room overseer.

The Underwear Institute reelected **Thomas O. Moore,** P. H. Hanes Knitting Co., Winston-Salem, N. C., to the office of president during its recent annual meeting. Other officers and board members for the coming year are: **Robert F. Cooper** of Cooper's, Inc., Kenosha, Wis., first vice-president, a newly-created office; regional vice-presidents **Thomas D. Russell,** Russell Manufacturing Co., Alexander City, Ala., southern region; **Edward L. Gruber,** Spring City (Pa.) Knitting Co., middle Atlantic region; **James F. Nields,** Ware (Mass.) Knitters, Inc., northeast region; and **George D. McConnell,** Munsingwear, Inc., Minneapolis, Minn., western region. **F. Ramsey**

** first with 13¾" ... then 21" and now 30" diameter forged heads*

MILTON BEAMS*
(for Nylon and rubber yarns)
GIVE YOU THE BIG BONUS OF

SUPER STRENGTH

The super strength of Milton's forged head Tricot and Raschel Beams is no idle claim—it's been proven by yarn producers, big mills and small mills alike!

They're light in weight, yet rugged in design to give true dimensional stability without objectionable deflection or distortion. Milton's forged, heat-treated aluminum alloy heads and extra heavy barrels become a one-piece beam by the continuous weld process first introduced in the field by Milton. Trapped ends of yarn or misalignment of keyways are eliminated because there are no mechanical joints!

You name the yarn . . . monofilament, fine denier, low turn or high twist—synthetics or rubber, Milton gives you true-running, well balanced beams to handle unprecedented yardages and extreme pressures!

WRITE FOR FREE BULLETINS . . . No. 59-A on Light Metal Beams and No. 54-S on Steel Beams. The Milton line includes warp beams for broad, narrow fabric, velvet and carpet looms, as well as light metal raschel, tricot and section beams.

Thirty Years of Dependability in Yarn Beams

MILTON MACHINE WORKS, INC.

DESIGNERS • ENGINEERS • MANUFACTURERS

MILTON • PENNA.

PERSONAL NOTES

(from page 185)

Devereux, Oneita Knitting Mills, Andrews, S. C., was reelected treasurer.

Union Underwear Co., Inc., a wholly-owned subsidiary of Philadelphia and Reading Corp., has reelected **Jacob A. (Jack) Goldfarb**

Mr. Lazaar

Mr. Moore

chairman of the board and chief executive officer. At the same board meeting, **Everett J. Moore** was elected president and **Ted Lazar** was named executive vice-president.

The Wool Bureau, Inc., has chosen **J. Kenneth Sexton** chairman of the board for the year 1959-1960. Mr. Sexton is also president of the American Wool Council.

Fenwick Sheppard has joined Woolens and Worsteds of America, Inc., as membership director. He will make his headquarters at the offices of the association.

Judson Mills, Greenville, S. C., has named **Leslie E. Reynolds** plant engineer succeeding **W. T. Watson,** who has resigned.

A. D. Juilliard & Co., Inc., New York City, has announced the retirement of **K. J. Winter** after serving the company over 18 years. Mr. Winter most recently was assistant to company president **Harold Ackerman** as wool and yarn buyer and in the production department of the woolen and worsted division. These duties will be assumed by Mr. Ackerman, who has announced that no successor to Mr. Winter will be appointed.

The Fair Lawn (N. J.) Finishing Co. has elected **Weldon D. Helmus** president of the firm, succeeding **John J. Evans,** who is retiring. Mr. Helmus, who is currently president of the American Association of Textile Chemists and Colorists, was also reelected treasurer. **James P. Martin** has been chosen secretary to succeed **George F. Gaede** who has resigned.

Lion Knitting Mills Co., Cleveland, O., has elected **James R. Hibshman** president succeeding **Harold V. Ensten,** who becomes board chairman and treasurer. Other new officers are: **Raymond Kenyon,** assistant vice-president and production manager; **Stanley Yourish,** assistant vice-president and director of knitting and **William Wolfe,** executive assistant.

The following promotions have been made known by the M. Loweinstein & Sons, Inc., organization: **Robert W. Smith** to president of the Cotton and Storage Corp.; **Roy Coffee** to vice-president of the Orr and Lyons divisions in Anderson, Wamsutta Mills at Lyman, and the four Pacific Mills in Columbia, S. C.; and **Henry Buchanan** to vice-president of Limestone Manufacturing Co., Gaffney, S. C., Spofford Mills, Wilmington, N. C., the Covington (Ga.) Mills, and the Huntsville (Ala.) Manufacturing Co.

At the recent meeting of the board of trustees at the Institute of Textile Technology, the following new trustees were elected: **Thomas O. Boucher,** president of Chicopee Manufacturing Corp., New Brunswick, N. J.; **R. M. Vance,** president of Clinton (S. C.) Cotton Mills; **Welsford Bishopric,** president of Spray (N. C.) Cotton Mills; **C. H. Reynolds,** vice-president of Spindale (N. C.) Mills, Inc.; and **Lee Tillery,** vice-president of West Point (Ga.) Manufacturing Co.

J. C. Brooker, president of Brooker Spread Co., Dalton, Ga., has been chosen to head the Tufted Textile Manufacturers Association for the year 1959-60. Named vice-presidents were: **A. L. Zachry, Jr.,** president of the G. H. Rauschenberg Co. in Dalton, Ga.; **Russell Gebert,** vice-president of James Lees & Sons plant in Bridgeport, Pa.; **James T. Porter,** president of Tifton Rug Mills in East Point, Ga.; and **Arthur N. Richman,** president of Art-Rich Manufacturing Co., Dalton, Ga. Elected to the board of directors for the first time were: **L. P. Painter,** president of Painter Carpet Mills; **C. Ralph Ewing, Sr.,** vice-president of Candlewick Yarn Mills, Inc.; and **L. A. Lee,** president of L. A. Lee Co., all of Dalton, Ga.; **James Bryson,** Tex-Tuft Products, Rome, Ga.; and **Nolan D. Helms,** vice-president of Croft Carpet Mills, Inc., Fort Oglethorpe, Ga.

Mr. Brooker
TTMA

Mr. Simpson
Joanna

Frank H. Simpson, Jr., has accepted a position as assistant overseer in Weave Room I, second shift at Joanna (S. C.) Cotton Mills. In addition he has assumed responsibility of instructing 19 students in a textile course at Clinton High School during the morning hours.

OBITUARIES

Ashby Baker, Jr., president, director, and purchasing agent for Virginia Mills, Inc., Swepsonville, N. C.

Henry C. Ball, 61, executive vice-president, Tufted Textile Manufacturers Association, Dalton, Ga.

Hugh Y. Ballard, 62, Howell Manufacturing Co. executive, Gastonia, N. C.

Russel L. Brinton, 74, retired president and director of H. Brinton Co., Merion Station, Pa.

Robert L. Brophy, 63, vice-president and board chairman of Cotswold Industries, Inc., Atlanta, Ga.

Horace A. Carter, 90, president and treasurer of The William Carter Co., Needham Heights, Mass.

L. W. Cleveland, 59, retired textile official, Asheville, N. C.

Emil D. Kattermann, 61, vice-president of Swiss Knitting Co., Dover, N. J.

Richard B. Leake, Jr., 66, retired official of Russell Manufacturing Co., Bennington, Vt.

Charles Marks, 66, president of Cedar Throwing Mills, Paterson, N. J.

Lester Martin, 52, president and board chairman of Bates Manufacturing Co., New York, N. Y.

John F. Noble, 70, sales representative for Scholler Bros., Philadelphia, Pa.

Richard C. Pohlers, 57, sales executive for the cotton division of J. P. Stevens & Co., Inc., Summit, N. J.

Sheppard H. Royle, 68, textile executive, Philadelphia, Pa.

William O. Sanford, 94, retired superintendent of Cyril Johnson Woolen Co., Essex, Conn.

E. N. Sitton, 68, former president of Pendleton Manufacturing Co., Anderson, S. C.

MILL NOTES

Elizabeth Webbing Mills, Inc., Central Falls, R. I., has been purchased by Martin Lifland, former president of Everlastik, Inc. An intensive modernization program, designed to streamline production methods, is planned. Now serving as officers of the firm are: president, Mr. Lifland; vice-presidents, Robert S. Kingsbury and Morris Kesselman; treasurer, William Hammer; controller and assistant treasurer, Milton Rose; secretary and clerk, Samuel S. Weinrebe.

A new wool spinning firm is preparing to begin operations under the name of **Reid Manufacturing Co.** in Danielson, Conn. The firm will occupy the former Cramer Controls Corp. property, which is reported to have been purchased by **Whetstone Mills, Inc.**

Colorado's only textile mill, **Rocky Mountain Textile Mills, Inc.,** is in the process of liquidation. All equipment belonging to the Denver, Colo., firm is being sold, and the inventory, good will, and trade names have been purchased by **Russell Hosiery Mills, Inc.,** Star, N. C.

Roxbury Carpet Co. and its wholly-owned subsidiary, **Roxbury Southern Mills, Inc.,** have jointly announced plans to spend more than $100,000 on modernization and new equipment at the Chattanooga, Tenn., mill. Designed to strengthen the firm's output of tufted floor coverings, the capital expenditure will be partially allocated to equipment permitting the addition of patterns in tufted carpets and to aid the development of foam rubber floor covering at the mill.

The rayon operations, including the fiber blending unit, of **Shuford Mills, Inc.,** will be moved in the near future from the firm's Highland Cordage plant in Hickory, N. C., to the former Brookford Mills building in Brookford, N. C. The building had been used for warehousing purposes. Space made available by the realignment will be used for storage by the Highland plant and the tape division.

Contracts have been awarded for the construction of a major addition to the plant of **Southern Webbing Mills, Inc.,** Greensboro, N. C. Estimated to cost in excess of $300,000, the new structure will be utilized for production and storage.

Ground has been broken for the first of two new extensions to the bleaching and dyeing operations of **Springs Cotton Mills** at Grace's Station, S. C. The first section is expected to be in operation by September 15. When the $5 million expansion is complete, it is estimated that the firm can make available 1,000 new jobs in the community.

The manufacturing facilities of **Borden Mills,** Kingsport, Tenn., have been acquired by **J. P. Stevens & Co., Inc.** A spokesman for the Stevens firm stated that "operations at Kingsport will continue uninterruptedly and all outstanding contracts will be delivered as scheduled." He further emphasized that there will be no relaxation of established quality standards. * * * A $2 million expansion program has been instituted at the Utica Mohawk plant near Clemson, S. C. The program includes additions to the main plant to house the cloth room, slashers, additional finishing equipment, and new looms with the necessary complementary equipment. Plans also call for the construction of a new boiler house and the installation of a 110,000 lb per hr boiler.

A new line of Naugaweave for furniture upholstery, called Advance, has been introduced by the **United States Rubber Co.** Made in the company's Stoughton, Wis., plant, Advance is produced by a new manu-

NEW production perfection from OLD SEAMLESS machines!

VAC-RITE'S Vacuum Draw Down

Applies 6-8 ounces of draw on stockings as they are knit. Each completed stocking pops smoothly into handy receptacle.

- IMPROVES WELT AND KNIT
- BOOSTS PRODUCTION
- AUTOMATIC HEEL AND TOE CUT-OFF
- REDUCES PICKS
- CUTS NEEDLE DAMAGE
- BUILT OF SMOOTH, CLEAR PLEXIGLAS

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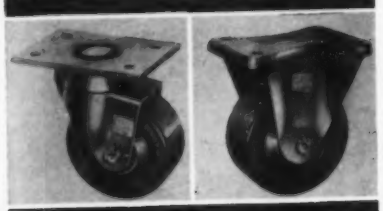
These Features Give You Better Performance . .

DARNELL CASTERS WITH PHENOLIC WHEELS



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MILL NOTES

(from page 187)

facturing process that combines vinyl and fabric. It is said to have the soft look and feel of fabric and the durability and cleanability of vinyl.

An expansion program, estimated to cost $400,000, has been instituted by **Cole-Gunn Hosiery Mills, Inc.,** Yanceyville, N. C. A 4,500 sq ft building addition will provide space for sufficient seamless hosiery machinery to produce 3,000 dozen pairs per week. The present production of 3,000 dozen pairs of full-fashioned hose will be maintained, giving a total weekly capacity of 6,000 dozen pairs when all machines are in operation by the end of 1960.

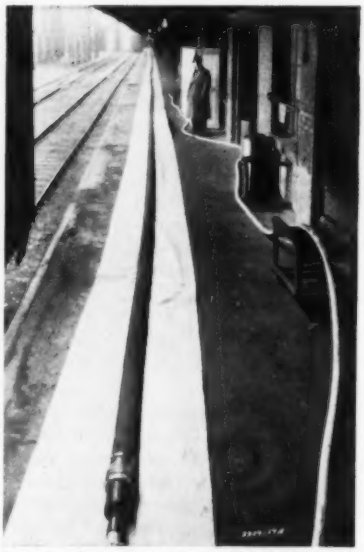
Hanes Hosiery Mills Co., Winston-Salem, N. C., has announced plans to double present production. The program, costing $27.5 million, calls for construction of a new mill near Winston-Salem and the installation this year of 600 new machines in its present plant. The new mill, scheduled for completion in 1960, will employ from 1,500 to 2,000 persons. Plans provide for later construction of an adjoining unit with space for another 2,000 machines. Hanes' present production level is said to be 50 million pairs of seamless stockings annually.

Commission dyeing has been dropped from the services offered by **Hoffner Rayon Co.,** Philadelphia, Pa. Future activities of the firm will be concentrated on its throwing operations at the Quakertown, Pa., location, and sales of finished synthetic yarns. The firm made clear that dyeing operations will continue at the Philadelphia, Pa., location, making possible delivery of a complete package for their customers. Only commission dyeing has been discontinued.

The principals of Asbury Sportswear have formed **Asbury Knitting Mills, Inc.,** to manufacture a separate line of full-fashioned knitwear. Ernest Heuman and Ernest O. Kahn, president and secretary-treasurer respectively of Asbury Sportswear, will serve in similar capacities with the new corporation.

Avondale Mills, Inc., has purchased the non-woven operation from **Buck-Felt, Inc.,** Siluria, Ala., and has moved it into the second floor of the old Sallie B. Plant in Sylacauga, Ala. The purchase enables Avondale to offer a choice of non-wovens which are now produced either by carded process or by random web method.

A process has been developed by **Goodyear Tire & Rubber Co.,** Akron, O., to build large diameter hose without splices in lengths which are limited only by the handling capacities of transportation facilities. Management made known that the

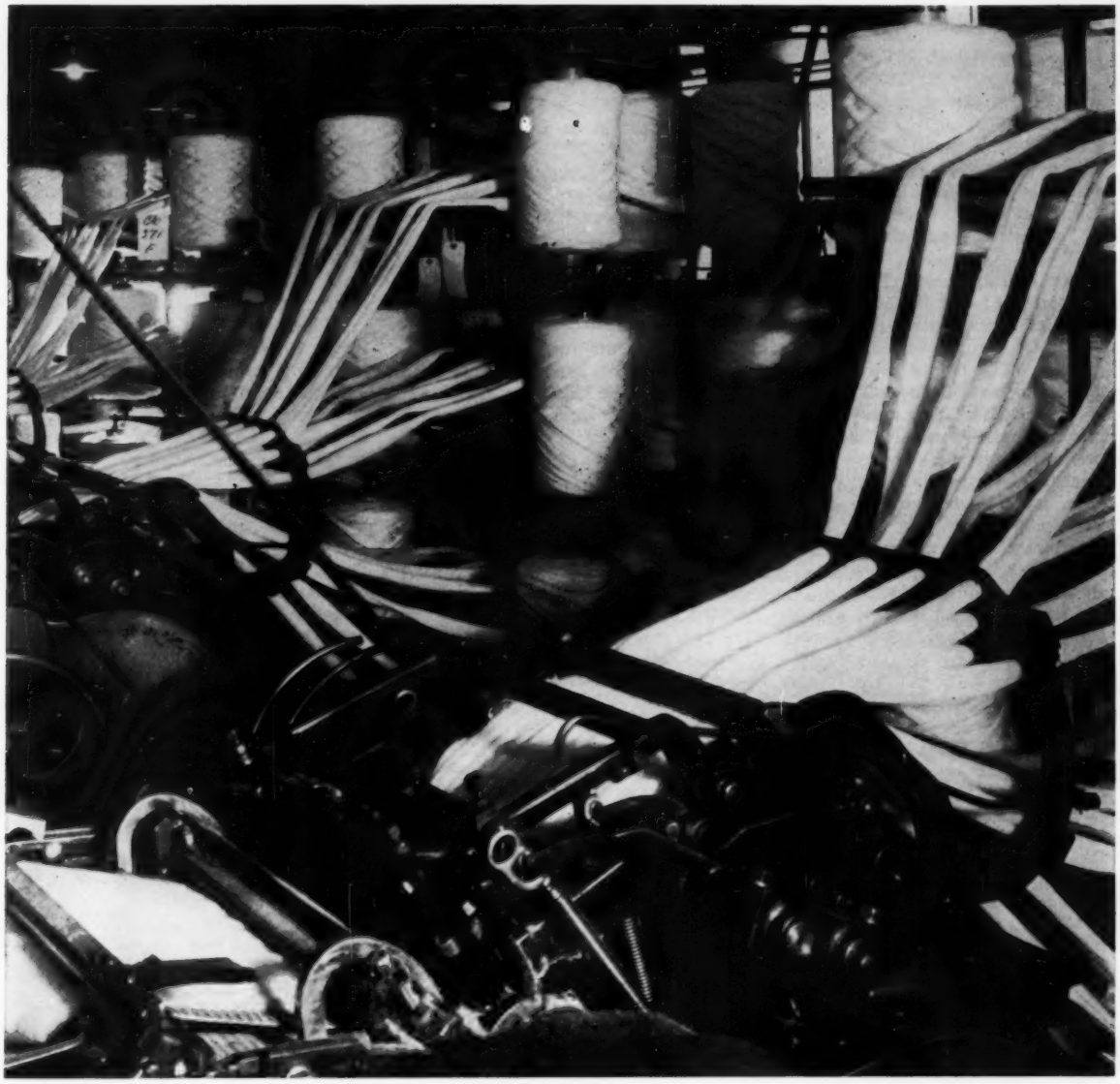


Five hundred feet of unspliced, four-inch hose being tested on a shipping dock.

new hose can be manufactured to float or sink for marine use, and to handle all known chemicals and fuels. The continuous, production process can be adjusted to produce hose in sizes from two to eight inches inside diameters at the present time. * * * The houses in the Atco subdivision at Cartersville, Ga., have been sold to employees of Goodyear on a seniority basis.

A $750,000 expansion program is under way at the Rochdale, Mass., mill of **Carleton Woolen Mills.** Scheduled for completion by the end of the year, the program includes construction of a 25,000 sq ft one-level building and the purchase of replacement and additional equipment. The old mill will be stripped of machinery and used for storage. The expansion will provide a straight-line production flow which is expected to increase productive capacity by 15 to 20 per cent.

A new corporation, **Carolac N. V.,** has been formed by **Caron Spinning Co.** for the purpose of processing



Promised feat . . . or delivered feet?

The real measure of success in textile lubrication lies in *feet* of textiles produced—not *promised* feats of performance. It's the maximum yardage actually realized that counts. For over 70 years Standard Oil lubricants have been *first* in popularity with southern textile industry . . . a popularity that has been built on the solid foundation of production *results*.

Constant tests and quality-controls throughout the manufacturing process assure Standard Oil lubricants with an unvarying high quality. Continuing research in the world's largest facilities for petroleum testing maintains a steady flow of Standard Oil product improvements and new lubrication techniques.

Your Standard Oil lubrication specialist stands ready to give you the full benefit of Standard Oil experience with a lubrication plan tailored to *your* specific requirements.

STANDARD OIL
LUBRICANTS

STANDARD OIL COMPANY
(KENTUCKY)

MILL NOTES

(from page 188)

synthetic fibers for the Common Market and Free Trade countries of Europe. The manufacturing plant will be in Dordrecht, Holland, and will occupy a building now under construction, but scheduled for completion by the end of the year.

The Batesburg and Lexington, S. C., plants of **Burlington Industries, Inc.,** are now operated by Catlin Farish Co., an integrated Burlington division. The plants were formerly under the B. I. Cotton Mills division of the company. The two plants are being completely modernized for the production of wide fancy tickings. The newly-integrated division will have sales headquarters in New York City. * * * A new hosiery finishing plant is under construction in Pomona, Calif., by the Burlington Hosiery Co. division. When the 85,000 sq ft, air-conditioned building is completed, the company's present facilities in Los Angeles will be vacated. Larry Huggins will continue as plant manager.

Cattoosa Knitting Mill has been formed and is operating the former **Homestead Knitting Mills** sweater plant in Crossville, Tenn. The new firm expects to employ 120 persons. Ike Safdie is plant manager.

Chicopee Manufacturing Corp. has announced the acquisition of the assets of Refined Products Corp., Lyndhurst, N. J. The firm, which manufactures special processing chemicals and resins for industrial and agricultural uses, will be continued as a division of Chicopee.

The move from Utica, N. Y., to Lumberton, N. C., has now been completed by **Jones Knitting Corp.,** and operations are concentrated in the old Dresden Mill plant in East Lumberton. Recent building renovations include the remodeling of 5,000 sq ft of the heretofore unused basement for a shipping room.

Arrangements for the sale of the real estate of the **Kenosha (Wis.) Full Fashioned Mills, Inc.,** have been completed. The firm will continue in its present location through June, 1960, meanwhile seeking a new location in the area, according to company spokesmen.

Selected management personnel of **Kingston Knitting Mills, Inc.,** and **Barclay Knitwear Co., Inc.,** both located in Kingston, N. Y., have completed a six-weeks course in supervisory human relations problems conducted under the auspices of Cornell University's New York State School of Industrial and Labor Relations.

A package program has been made available to employees who are prospective village homeowners by **Clinton-Lydia Mills,** Clinton, S. C. The plan includes automatic life insurance tailored to fit the needs of the home purchasers for life insurance protection in the amount of the mortgage. Premiums are included in monthly payments if desired.

Fulton Cotton Mills has exercised its option and purchased controlling interest in Continental Gin Co., Birmingham, Ala. Plans are underway to enlarge and modernize gin machinery manufacturing facilities at Prattville, Ala., and Dallas, Tex. It was emphasized that the Birmingham plant will continue to manufacture material handling equipment.

The knitting yarn plant being constructed by **National Spinning Co.** at Brunswick, N. C., is scheduled to begin operations this fall. The new plant will employ about 125 persons in the manufacture of synthetic and wool knitting yarns for the knitted outerwear industry. Company president Philip Leff stated that selection of the site "reflects the good experience" the firm has had at its Washington, N. C., yarn mill.

A new firm, **The Penn Dye and Finishing Co.,** was recently incorporated and has announced plans to establish a plant to dye and finish knitted fabrics in Pine Grove, Pa. A spokesman for the company stated that operations will start with 50 employees, with a full staff of 75 planned when production reaches anticipated normal levels. The plant will be equipped to process knitted fabrics of synthetics and blends.

Plans have been initiated to increase braiding capacity in the **West Georgia Mills,** Whitesburg, Ga., to meet increased customer demands. The firm currently sells over 80 different cords and packaged cord products of cotton, nylon, and polyethylene to about 600 different businesses.

An expansion program that will more than double the size of the present establishment has been announced by **West Knitting Corp.,** Wadesboro, N. C. An addition to Mill No. 2 is being built to house the knitting department. Removal of that department from Mill No. 1 will provide more space for additional cutting, sewing, and general manufacturing.

Zephyr Textiles, Ltd., has purchased **The Rosamond Woollen Co., Ltd.,** Almonte, Ont. The Almonte plant previously engaged in blanket production will be used for spinning carpet yarns.

Machines for the production of seamless hosiery are being installed at **Wyatt Knitting Co.,** Sanford, N. C. The firm previously produced full-fashioned hosiery exclusively.

S. J. Weinberg, Jr., vice-president of Fiberglas Textile Fabrics division of OWENS-CORNING FIBERGLAS accepts a merit citation "for outstanding achievement in the fabric field as exemplified by Fiberglas Aerocor Yarn" from Harold W. Grieve, president of the American Institute of Decorators. Looking on are Mrs. Peggy Menkel of Howard & Schaffer, Ben Rose of Ben Rose, Inc., and Ross Littell of Knoll Associates, who also received citations for designs on Fiberglas Aerocor yarn fabric.

SUPPLIER NOTES

Nopco Chemical Co. has announced the acquisition of all the capital stock of **Jacques Wolf & Co.** Nopco will operate Jacques Wolf as a wholly-owned subsidiary, retaining its present staff and sales force.

Para-Chem Southern, Inc., is now in operation as a wholly-owned subsidiary of **Para-Chem, Inc.** All products of the parent firm are available at the new plant and warehouse, located at Laurens Rd. and Louise St. in Greenville, S. C.

J. Allan MacLean has assumed his new responsibilities as president of **Dodge Manufacturing Corp.** He succeeded Joseph E. Otis, Jr., who was elevated to board chairman.

Mr. MacLean
Dodge Mfg.

Mr. Singer
Finetex, Inc.

Robert E. Singer has joined **Finetex, Inc.,** as sales manager in the New England district. He makes his headquarters in the Cranston, R. I., offices of the firm.

Additional facilities to manufacture Tyrex viscose tire cord will be made available at the Cleveland, O., plant of **Industrial Rayon Corp.** in the near future.

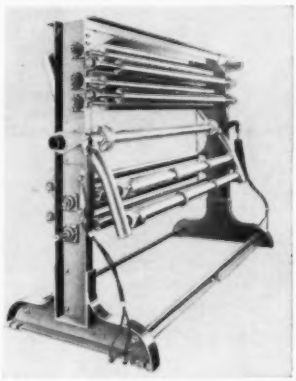
The appointment of George H. Burns as district manager, Philadelphia, Pa., has been announced by **Clinton Corn Processing Company.** Mr. Burns will be assisted by Bradford Low and Ernest Wigfield. The transfer of John Weir from New York to Baltimore for coverage of the Maryland and central Pennsylvania areas has also been announced. H. H. Lucas has been added to the New York sales staff.

James Hunter Machine Co. has completed removal of the Greenville, S. C., plant to enlarged facilities at Mauldin, S. C. The new plant will specialize in the manufacture of automatic blending equipment for cotton, synthetic, and wool fibers, as well as card and garnett feeds. A feature of the plant is a display room where automatic blending equipment is installed for demonstration purposes and to process customers' samples.

John W. Farley has been named manager of Magic Door sales by the Stanley Hardware division of **The Stanley Works.**

Lester M. Cole was recently elected vice-president in charge of sales of **The Warner & Swasey Co.** In his

New South Carolina plant of James Hunter Machine Co.



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For Better
DACRON SINGEING
Water-Cooled Gas-Fired

This IHE Dacron Singeing Machine is engineered to give trouble-free, cost-saving performance. The special IHE design features water-cooled rolls and four ceramic type burners for continuous and maximum efficiency. Cloth reverses direction as it travels over water-cooled rolls. This loosens and sets up fibre ends so cloth passes burners—singes matted fibre ends that would not normally be singed by ordinary methods—resulting in an absolute minimum of pilling. Burners are pneumatically and automatically disengaged from cloth when machine is stopped.

Please write for detailed information.

Industrial Heat ENGINEERING CO.
121 CLEVELAND STREET, GREENVILLE, SOUTH CAROLINA

SUPPLIER NOTES

(from page 191)

new capacity, Mr. Cole heads all of the firm's sales operations, including those of the textile machinery division.

Fred Nuttall has joined **Joel S. Perkins & Son** as southern representative. Mr. Nuttall will call on mills in Georgia, Alabama, and Mississippi from his LaGrange, Ga., headquarters.

Mr. Nuttall
Joel S. Perkins

Mr. Schuler
Permacel

John E. Schuler has been appointed southern industrial division manager of **Permacel.** He will make his headquarters at the firm's Atlanta, Ga., division office.

The United States Department of Agriculture has licensed **Benjamin Booth Co.** and **Carolina Machinery Co.** to manufacture and sell the USDA-developed granular top for cotton cards. A new sales and service organization, to be known as **Carolina-Booth,** has been formed to serve mills in the southeast. Operating out of Charlotte, N. C., this sales and service firm provides a complete line of Booth Micr-O-Grind card clothing, as well as the granular top conversion units.

Russell B. Galloway has been named general sales manager of **Synthane Corp.,** succeeding the late E. Eldridge Smith.

The opening of a million-dollar laboratory, devoted exclusively to developing synthetic latices, and the completion of a three-fold plant expansion have been announced by **International Latex Corp.** Under the direction of Dr. Verle Miller, laboratory employees are organized in groups to attack problems of latex applications in carpets, nonwoven fabrics, textiles, etc. In addition to working on detailed problems brought in by customers, the new laboratory facilities will be employed on long range research goals designed to increase the value of latex in each consuming field.

International's textile laboratory features a complete, miniature, nonwoven fabric manufacturing plant, useful for developing applications as well as determining bonding power of latices.

The executive offices of **Norman Jaspan Associates, Inc.,** and its fact-finding division, **Investigations, Inc.,** have moved to larger quarters at 60

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4 — Cell Magazine for 8¾" Quills

4 — Bank Electric Stop Motion,
Top Beam Stands—1 H.P. 550 Volt, 3 phase, 60 cycle
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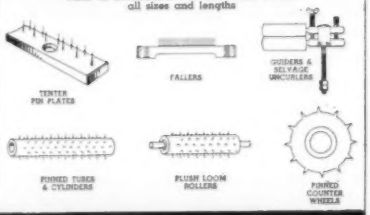
PINS IN STAINLESS, MONEL, PLAIN STEEL
all sizes and lengths



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SAXL TENSION METERS
Quick Trigger Action
For Yarns, Wires, Rubber, Cords and Tape
American made and serviced, always accurate
TENSITRON, INC., Harvard, Mass.

BOBBINS—BOBBINS—BOBBINS

Our specialty is good used automatic loom bobbins. We also deal in twister and rovin bobbins. Send us samples of what you need or what surplus bobbins you have.

CHARLES G. STOVER COMPANY
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KNITTER - MECHANIC WANTED. STEADY WORK, FULL CHARGE, FIXING SIMPLEX KNITTING MACHINES. REPLY BOX 63 TEXTILE INDUSTRIES, 806 PEACHTREE ST., N. E. ATLANTA 8, GEORGIA.

H. C. Andersen, president of Scandinavian-American Nylon-Hosiery A/S, Naerum, Denmark; Herman Booton, director of W. E. Booton, Ltd., Leicester, England; and Hans Fiedler, general sales manager of Textile Machine Works, discuss the licensing of TMW to build the Booton twin-feed women's seamless hosiery machine.

E. 42nd St., New York City. At the same time, Nicholas Prounis was named to the new position of vice-president, operations, and Jay McCracken was appointed vice-president, sales and personnel relations, also a new post.

Textile Machine Works has announced plans to manufacture and sell two kinds of multiple-feed ladies' seamless hosiery knitting machines: (1) a machine using two carriers for the welt and leg and only a single carrier in the heel and toe and (2) a machine using two carriers throughout the entire stocking. The first to be marketed will be a two-feed machine using the single-feed construction in the heel and toe, made under license from W. E. Boonton, Ltd., of Leicester, England. It is expected that limited quantities of this machine will be available for delivery late this year and regular production quantities early in 1960. It was explained that while initial development results with the MF-400 (TI for Aug., 1958, p. 157)—a seamless machine employing two carriers throughout the stockings—have been encouraging, there is still work to be done before the machine is ready to be released for sale.

Karl Lieberknecht, Inc., has revealed the purchase of the **Royersford Needle Works** and its subsidiary, the **Bard Manufacturing Co.** The two firms will be operated as wholly-owned subsidiaries of Lieberknecht. In making the announcement, company president LeRoy C. Milliken stated that operations at both plants will be continued and plans for expansion are under consideration.

Discontinuance of the manufacture of slashers and slasher parts (except size pumps) has been made known by **Saco-Lowell Shops** Replacement Parts Division. In order to assure customers of a source for replacement parts for Saco-Lowell slashers in place, the company has concluded arrangements with the West Point Foundry & Machine Co. to manufacture these. Therefore, in the future orders for Saco-Lowell slasher parts should be sent directly to the West Point, Ga., machinery firm.

John J. Keville (left), marketing manager for LUDLOW PAPERS, INC., receives an explanation of the mechanical features of a Hayssen hosiery wrapping machine from Fred Koehn, HAYSSEN MANUFACTURING CO. The machine was installed in the Ludlow booth during the recent AMA packaging show in Chicago. Ludlow's new polypropylene film, "Proplene," was used as an overwrap.

Dr. Eugene W. K. Schwarz and Henry C. Speel have formed **Schwarz, Speel and Associates,** textile and chemical consultants, with offices at 101 W. 31st St., New York City. The firm is affiliated with Skeist and Schwarz Laboratories. The company is engaged in product development and marketing services, with special emphasis on fiber development and textile dyeing and processing technology.

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ADVERTISER'S INDEX

A

Acme Steel Co. ..... *
Adams Co., Inc., R. P. ..... *
Adell Chemical Co. 160
Advertising Council, Inc. ..... *
Akron Spool & Mfg. Co. ..... *
Aldrich Machine Works 41
Allen Beam Co. 170
Allen-Bradley Co. ..... *
Allen Sons' Co. Div., Wm. ..... *
Allied Chemical Corp.,
General Chem. Div. ..... *
Nitrogen Div. ..... *
National Aniline Division 18, 19
National Aniline Div., Fibers
Sales & Service 118
Solvay Process Div. 43
American Air Filter Co. ..... *
American Cancer Society ..... *
American Enka Corp. ..... *
American Gas Association 126, 127
American Moistening Co. 7
American MonoRail Co., Inc. 108
Conveyor Division ..... *
American Red Cross ..... *
American Steel & Wire ..... *
American Viscose Corp. ..... *
Anheuser-Busch, Incorporated 37
Antara Chemicals, General
Aniline & Film Corp. ..... *
Applied Engineering Co. 165
Armstrong Cork Co. 122, 123
Arnold, Hoffman & Co. 16
Atkinson, Haserick & Co. ..... *
Atlanta Belting Co. ..... *

B

Bahnson Co. 36
Barber-Colman Co. (Textile Div.) 68
Barco Manufacturing Co. 166
Becco Chemical Division 2
Benjamin Booth Co. 120
Bijur Lubricating Corp. ..... *
Birch Bros., Inc. ..... *
Borne Chemical Co. ..... *
Buffalo Forge Co. 17
Buffalo Pumps, Inc. ..... *
Butterworth & Sons Co., H. W. ..... *

C

Carbic Color & Chemical Co., Inc. ..... *
Carter Traveler Co.,
Div. A. B. Carter, Inc. ..... *
Celanese Corp. of America &
Subsidiary Cos. ..... *
Central Motors Lines, Inc. ..... *
Chandler Mach. Co. ..... *
Chemstrand Corporation (Acrilan) ..... *
Ciba Company, Inc. ..... *
Classified Ads 192
Cleveland Tramrail Division, The
Cleveland Crane & Engr. Co. ..... *
Clinton Corn Processing Co. 124
Clipper Belt Lacer Co. ..... *
Cobble Bros. Mchy. Co. ..... *
Cocker Mach. & Fdry. Co. 66
Colgate-Palmolive Co. 112
Collins Brothers Mach. Co. ..... *
Columbia-Geneva Steel ..... *
Corn Products Sales Co. ..... *
Cotton-McCauley & Co., Inc. ..... *
Courtaulds (Ala.), Inc. ..... *
Curlator Corp. (Textile Div.) ..... *
Curtis & Marble Machine Co. ..... *

D

Darnell Corp., Ltd. 188
Dary Ring Traveler Co. 168
Davis & Furber Mach. Co. ..... *
Dayton Rubber Co. 30, 31
Delmhorst Instrument Co. 160
Deublin Company ..... *
Diamond Crystal Salt Co. ..... *
Diehl Mfg. Co. ..... Second Cover
Dixie Bearings, Inc. 151
Dodge Mfg. Corp. ..... *
Dommerich & Co., L. F. ..... *
Dow Chemical Company 24, 25
Textile Fibers Dept. ..... *
Lurex Division 13
Draper Corporation 1, 8
Dronsfield Bros., Ltd. ..... *
Duesberg-Bosson of America 164
Du Pont de Nemours & Co., Inc., E. I.
(Electrochemicals Dept.) ..... *
Du Pont de Nemours & Co., Inc., E. I.
(Finishes Div.) ..... *
Du Pont de Nemours & Co., Inc., E. I.
(Textile Fibers Div.) 128, 129

E

Eastern Engineering Co. 168
Eastman Machine Co. ..... *
Eriez Mfg. Co. 184
Esso Standard Oil Co. 150
Exact Weight Scale Co. ..... *

F

Fafnir Bearing Co. ..... *
Fairbanks, Morse & Co. ..... *
Fairtex Corporation ..... *
Ferguson Gear Co. ..... *
Fiber Controls Corp. ..... *
Fisher Mfg. Co. ..... *
Foster Machine Co. 28
Foxboro Company 34
Franklin Process Co. ..... *

G

G P E Controls, Inc. 14
Gardner Denver Co. ..... *
Garland Manufacturing Co. ..... *
Gaston County Dyeing Machine Co. ..... *
Gates Rubber Co. ..... *
General Dyestuff Corp. ..... *
General Radio Co. ..... *
Georgia-Carolina Oil Co. ..... *
Gessner Co., David ..... *
Goodrich Chemical Co., B. F. 125
Goodyear Tire & Rubber Co., Inc.
(Chemical Prod.) 5
(Industrial Prod. Div.) ..... *
Gray Company, Inc. ..... *
Guider Specialty Co. 189
Gulf Oil Corp. ..... *

H

Harshaw Chemical Co. 40
Hartford-Greenville Div.,
Standard Screw Co. ..... Front Cover
Hayssen Mfg. Co., Inc. ..... *
Heller & Co., Walter E. 62
Herbert Products, Inc. 168
Herr Mfg. Co. ..... *
Houghton & Co., E. F. 46
Howard Bros. Mfg. Co. ..... *
Hubinger Co. 175
Hunter, Inc., James ..... *
Hunter Machine Co., James ..... *

I

Ideal Industries, Inc. 39
Industrial Heat Engineering Co. 191
International Salt Co. 64

J

Jacobs Northern Div., E. H. ..... *
Jenkins Metals Shops, Inc. 159
Jenkins' Sons, Inc., M. W. ..... *
Johnson Bronze Co. ..... *
Johnson Corp. 164

K

Keever Starch Company 144
Kemp Mfg. Co., C. M. ..... *
Kennett Materials Handling Division
National Vulcanized Fibre Co. 12
Kidde Textile Mchy. Corp. 132, 42
Klauder Weldon Giles Machine Co. 6
Koppers Company, Inc.,
Chemicals & Dyestuffs Div. ..... *

ADVERTISER'S INDEX

L

Laurel Soap Mfg. Co. 156
Lestershire Spool Division
National Vulcanized Fibre Co. ..... *
Lincoln Engineering Company ..... *
Link-Belt Co. ..... *
Little Giant Products, Inc. ..... *
Livingston & Haven Inc. 38
Lockwood Grene Engineers, Inc. ..... *
Loper Co., Ralph E. 162
Lovejoy Flexible Coupling Co. ..... *
Ludell Mfg. Co. ..... *

M

Maguire & Co., Inc., John P. 162
Marshall & Williams Corp. 44
McDonough Power Equipment, Inc. 162
Meadows Mfg. Co. 116
Metlon Corp. ..... *
Merrow Machine Co. 157
Mill Devices Co.,
Div. A. B. Carter, Inc. ..... *
Milton Machine Works, Inc. 185
Minneapolis-Honeywell Regulator
Co., Industrial Div. ..... *
Minnesota Paints, Inc. ..... *
Monsanto Chemical Corp. 177
Monticello Bobbin Co. 22
Moretex Chemical Co. 167
Morton Machine Works 49
Morton Salt Co. 35

N

National Business Publications, Inc. ..... *
National Industrial Advertisers
Association, Inc. ..... *
National Ring Traveler Co. ..... *
National Starch Prod., Inc. ..... *
National Tube ..... *
National Vulcanized Fiber Co. 12
Nemo Industries, Inc. ..... *
New York & New Jersey Lubricant
Co. ..... *
Nitrogen Division, Allied Chemical
Corp. ..... *
Nopco Chemical Co. ..... *

O

Oakite Products, Inc. 62

P

Pabst Brewing Co. ..... *
Parks-Cramer Co. 52, 53
Patterson-Kelley Co., Inc. ..... *
Penick & Ford, Ltd., Inc. ..... *
Pennsalt Chemicals Corp. ..... *
Perfecting Service Company ..... *
Perkins & Sons, Inc., B. F. ..... *
Pneumafil Corp. ..... *
Polymer Industries, Inc. ..... *
Powell Valves ..... *
Proctor & Gamble Distributing Co. ..... *
Proctor & Schwartz, Inc. ..... *
Puritan Chemical Co. ..... *

R

Radio Corp. of America
Industrial Electronic Prod. ..... *
Red Cross ..... *
Red-Ray Manufacturing Co., Inc. ..... *
Reeves Division, Reliance
Elec. & Engineering Corp. ..... *
Reiner, Inc., Robert 130
Reliance Elec. & Engr. Co. ..... *
Republic Steel Corp. 32, 33
Rhoads & Sons, J. E. 48
Richards-Wilcox Mfg. Co. ..... *
Ridge Tool Company ..... *
Robbins & Myers, Inc. ..... *
Robert & Co., Associates, Inc. 196
Roberts Co. 9
Royce Chemical Co. ..... Fourth Cover

S

Saco-Lowell Shops 20, 140
Sandoz, Inc. 11
Sargent's Sons Corp., C. G. ..... *
Scheer Co., Inc., Geo. ..... *
Scholler Bros., Inc. ..... *
Scott & Williams, Inc. ..... *
Semet-Solvay Petrochemical Div.,
Allied Chem. & Dye Corp. 142
Seydel-Woolley & Co. ..... *
Shell Chemical Corp. 15
Shell Oil Co. 23
Signode Steel Strapping Co. 152
Simco Company ..... *
Sims Company 70
Sims Metal Works 60
Sinclair Refining Co., Inc. 143
Sirrine & Co., J. E. 193
Sonoco Products Co. 29
Southern Airways Co. 56
Southern Shuttles Div. 25
Southern States Equip. Corp. 26
Southern Textile Works ..... *
Spaulding Fibre Co., Inc. 114
Spraying Systems Co. 158
Square D Company ..... *
Staley Mfg. Co., A. E. 58, 59
Standard Brands, Inc. 154
Standard Chemical Prod., Inc. ..... *
Standard Oil Co. (Kentucky) 189
Star Paper Tube, Inc. 170
Stauffer Chemical Co. 147
Steel Heddle Mfg. Co. ..... *
Stover Co., Charles G. 216
Stowe-Woodward, Inc. 10

T

Tennant Co., G. H. ..... *
Tennessee Coal & Iron ..... *
Tennessee Corp. 27, 44
Tensitron, Inc. 192
Terrell Mach. Co., Inc. 54
Texaco Inc. ..... *
Textile Industries ..... *
Textile Machine Works 139
Textile Paper Products, Inc. 169
Textile Shield Co., Inc. 193
Theiler Corp., H. J. 169
Toledo Scale Company ..... *
Ton-Tex Corp. 158
Trumeter Company ..... *
Trust Company of Georgia ..... *
Turbo Machine Co. 50, 51
Tyer Rubber Company ..... *

U

Union Steel Products Co. ..... *
U. S. Steel Corporation,
Stainless Steel Division 47
Universal Winding Co. 21
Uster Corporation ..... *

V

Vac-Rite Mfg. Co., Div.
Plastic Industries Inc. 187
Veeder-Root, Inc. ..... Third Cover

W

Want Ads 192
Ward Steel Company 170
Warner & Swasey Co. ..... *
Watson & Desmond 161
West Bend Equipment Corp. ..... *
West Point Fdy. & Mach. Co. 110, 111
Westvaco Chlor-Alkali Division,
Food Machinery & Chem. Co. ..... *
Whitehead Die Casting Co. ..... *
Whitin Machine Works 45
Whitinsville Spinning Ring Co. 166
Wicaco Machine Corp. ..... *
Wildman-Jacquard Co. ..... *
Wonalancet Company ..... *

Y

Young Aniline Works, Inc. 163
Young Machine Co., F. A. ..... *

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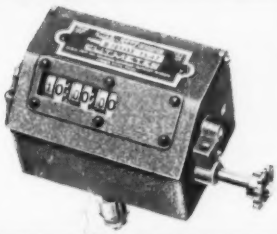
These convertible counters record production separately for each of 2, 3 or 4 shifts, providing a basis for wage payment. Basic 2-shift counter can have 3rd and 4th shift counting units added right in the factory, on the machine, as needed.



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AND PREDETERMINING COUNTERS:

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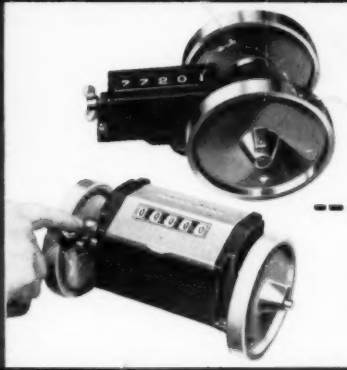

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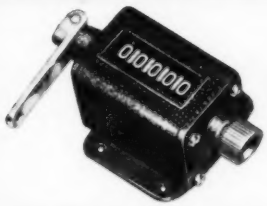
Worm-driven Reset Counter at left registers linear units as friction wheels pass over the material. Medium speed range. Widely used in inspection.

High Speed Reset Double Wheel Counter runs at speeds up to 6,000 rpm or 8,000 cpm.

Resets to zero with finger-flick.



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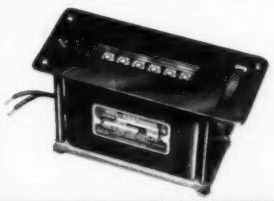
Used on a wide variety of textile machines. Revolution or ratchet types, for speeds up to 1,000 counts per minute.



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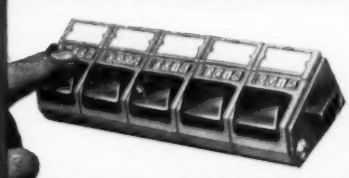

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